

Final Report

Economic Analysis for the Environmental Assessment of the North Atlantic Right Whale Ship Strike Reduction Strategy



PREPARED FOR

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National Marine Fisheries (NMFS)
Office of Protected Resources

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1. Introduction

The National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA) is considering regulations to implement a strategy to reduce mortalities to North Atlantic right whales as a result of vessel collisions. The proposed rulemaking (ANPR) issued by NOAA on June 1, 2004 calls for the establishment of new operational measures for the shipping industry including consideration of routing and speed restrictions. Operational measures include seasonal speed restrictions for specific U.S. East Coast port areas during particularly sensitive periods when whales are typically present. The ANPR states that the proposed speed restrictions would likely be in the range of 10-14 knots and would be in effect for a distance generally between 20-30 nautical miles from the shoreline. During periods outside of the seasonal speed restrictions, all areas along the Atlantic seaboard within the U.S. Exclusive Economic Zone would be subject to dynamic management area (DMA) measures if certain concentrations of right whales were sighted. The ANPR also allows for the establishment of designated routes that provide the greatest possibility of reducing the risk of collisions between vessels and whales. All of the proposed provisions would apply to non-sovereign vessels with a length of 65 feet and above.

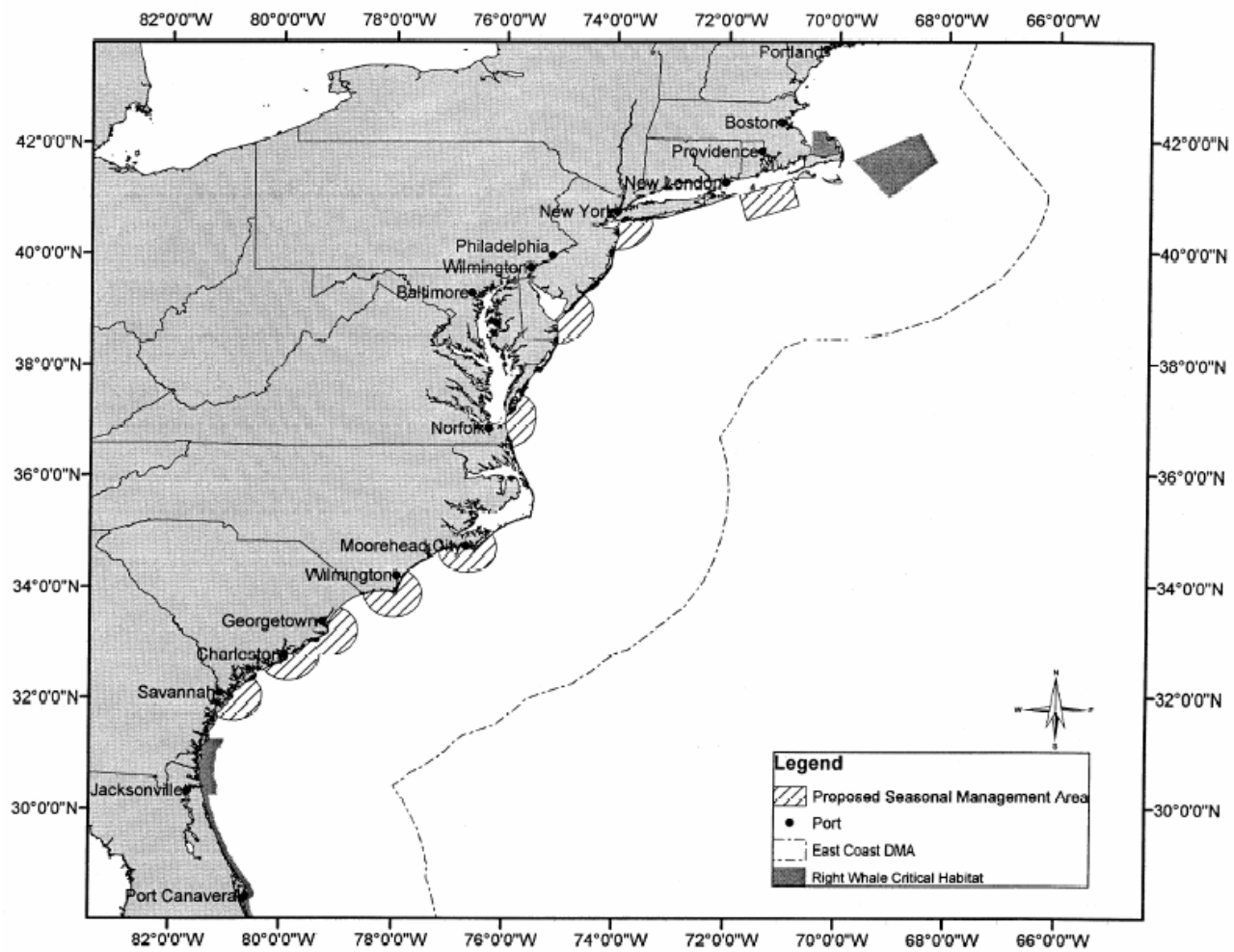
Nathan Associates Inc. was retained by Earth Tech, a NMFS contractor, to conduct the economic analysis for the Environmental Assessment of the proposed North Atlantic right whale ship strike reduction strategy.

Geographic Scope

The area covered by this study corresponds to the geographic regions delineated in the advance notice of proposed rulemaking (ANPR) issued by NOAA on June 1, 2004. The area covered range from the northernmost U.S. jurisdiction areas in the Gulf of Maine to an area just south of Port Canaveral Florida¹. Proposed right whale ship strike reduction measures were specified for three broad regions of the U.S. East Coast (southeastern Atlantic Coast, the Mid-Atlantic, and the northeastern U.S) that contained 14 ANPR port regions (Figure 1-1).

¹ Accordingly, this study does not include U.S. East Coast ports south of Port Canaveral such as Miami, Palm Beach, Fort Lauderdale and other smaller ports.

Figure 1-1. ANPR Areas for Proposed Measures



Source: Federal Register, 50 CFR Part 224, June 1, 2004

Prior Economic Models

Nathan Associates conducted a review of the following two reports have been identified that address the economic impact of proposed right whale ship strike protection measures²:

- Kite-Powell and Hoagland, Economic Aspects of Right Whale Ship Strike Management Measures, April 2002 and
- IMO Sub-Committee on Safety of Navigation, Routing of Ships, Ship Reporting and Related Matters, April 2002

In the sections below we discuss the approach and methodology used in each of these reports.

KITE-POWELL AND HOAGLAND, ECONOMIC ASPECTS OF RIGHT WHALE SHIP STRIKE MANAGEMENT MEASURES, APRIL 2002

This study prepared prior to the development of the proposed rulemaking measured order of magnitude of economic effects for shipping of contemplated ship traffic management measures. The primary source of data on vessel traffic was the U.S. Army Corps of Engineers' Waterborne Commerce of the United States for 1999. For some ports (Boston, New York/New Jersey, Charleston and Jacksonville) more specific port call information was obtained from port authorities.

The authors stated approach was to adopt base case assumptions that will tend to overstate actual costs and to present cost estimates for a range of traffic management parameters (maximum speed, geographic extent of restriction, etc.). The report included the ports of Portland ME, Portsmouth NH, Boston MA, Providence RI, New York and New Jersey, Philadelphia PA, Baltimore, MD, Hampton Roads VA, Wilmington NC, Charleston SC, Savannah GA, Fernandina Beach, FL, Jacksonville FL and Cape Canaveral FL. Smaller US East Coast ports were omitted from the study.

According to observations by the authors, the study had the following limitations:

- Assumed larger, more expensive vessels than those actually operating along US East Coast.
- Assumed normal operating speed higher than actual.
- Vessel data was very aggregated by type and size; monthly variation not analyzed.

²An update of the Kite-Powell study is currently underway. A separate report on the economic impacts of proposed modifications to the Atlantic Large Whale Take Reduction Plan (ALWTRP) is under preparation.

- Study did not model possible changes in number of port calls per year or the economic effects of such changes.
- Did not include fishing vessels, large recreational vessels or passenger ferries

The use of the US Army Corps of Engineers' as the principal data source also limited the study authors to use data for 1999 as there is a several year lag in the public dissemination of the USACE Waterborne Commerce reports.

IMO SUB-COMMITTEE ON SAFETY OF NAVIGATION, ROUTING OF SHIPS, SHIP REPORTING AND RELATED MATTERS, APRIL 2002

This document submitted by Canada to the IMO discussed the impact of proposed amendment of traffic separation scheme (TSS) in the Bay of Fundy. The purpose for amending the TSS is to reduce ship strikes of the highly endangered North Atlantic Right Whale by shifting the traffic lanes of the TSS from an area with the highest density of Right Whales to an area where there is lower density. The TSS was originally adopted by IMO in 1982. The TSS is located entirely within Canada's territorial waters and is mandatory for all vessels in accordance with the Collision Regulations.

The proposed amendment would add 5 miles for vessels calling at Saint John (600 vessels per year) and 11 miles for vessels calling Bayside and Eastport (100 vessel per year). The estimated impact on shipping was not quantified but was described as "minimal". Additional information on economic impact assessment has been requested from Transport Canada.

2. Existing U.S. East Coast Maritime Activity

In this section we will discuss existing maritime activity in the sections of the U.S. East Coast subject to the proposed rulemaking. The discussion focuses on the identification of the number, type and size of vessels that call at U.S. East Coast ports and the value of U.S. imports and exports by port area. We also present estimates of the ocean freight component of the imported goods. All data sources and the methodology employed are described fully with further detail presented in the accompanying appendices.

Vessel Arrivals at U.S. East Coast Ports

The principal data source used is the U.S. Coast Guard Vessel Arrival Database. This database includes all vessel arrivals at US ports of 150 GRT and above. We obtained data for 2002, 2003 and January through October 2004. The database includes 48 fields of information. Key information relevant for this study includes date/time of arrival; port; vessel type, size and flag; product type; and cargo amount. (Appendix A, Attachment 1).

The data was provided by the USCG in three data files corresponding to:

- Vessel arrivals (245,910 records)
- Vessel information (725,526 records)
- Arrival port codes (7,672 records)

For purposes of analysis we have divided the port regions into defined 26 specific port areas³ (Table 2-1).

³ We use the term “port area” because they may include smaller ports within the general vicinity of a larger port but not formally included within the boundaries of a single port authority.

Table 2-1. Hierarchy of U.S East Coast Region, ANPR Port Region and Port Area

Northeastern U.S.	Mid-Atlantic	Southeastern U.S.
Gulf of Maine	Block Island Sound	Southeastern U.S.
Eastport, ME	New Bedford, MA	Brunswick, GA
Searsport, ME	Providence , RI	Fernandina, FL
Portland, ME	New London, CT	Jacksonville, FL
Portsmouth, NH	New Haven, CT	Port Canaveral, FL
Racepoint	Bridgeport, CT	
Salem, MA	Long Island, NY	
Boston, MA	New York	
Cape Cod	New York City, NY	
Cape Cod	Delaware Bay	
	Philadelphia, PA	
	Chesapeake Bay	
	Hampton Roads, VA	
	Baltimore, MD	
	Morehead City, NC	
	Morehead City, NC	
	Wilmington, NC	
	Wilmington, NC	
	Georgetown, SC	
	Georgetown, SC	
	Charleston, SC	
	Charleston, SC	
	Savannah, GA	
	Savannah, GA	

Source: Prepared by Nathan Associates.

USCG Vessel Arrival Data Reconciliation

Our initial review of the USCG vessel arrival data determined that while it appeared comprehensive and complete in terms of vessel arrivals; there were numerous inconsistencies and data entry errors, particularly concerning the port designation. However, it was possible to correct these inconsistencies and errors using information contained in other data fields. In all Nathan Associates reconciled port codes for 29,968 records. (Appendix A, Attachment 2) and reconciled port code and state designations for 1,107 records. (Appendix A, Attachment 3)

In terms of geographic coverage, we first reduced the database to ports located in states along the U.S. East Coast based on the state designation included in the file. We then conducted a separate analysis to exclude ports located along the Gulf Coast of Florida, ports on the East Coast of Florida below Port Canaveral, and New York Great Lake ports. The result was 76,764 vessel arrival records for U.S. East Coast ports during 2002 through October 2004 pertaining to 7,130 vessels.

In order to reconcile the USCG vessel arrivals with the proposed ANPR regions and port areas we mapped the USCG port codes with ANPR port areas. (Appendix A, Attachment 4).

Information on the size of the vessel will be used later in the economic impact analysis to prepare estimates of the value of vessel time. However the USCG vessel arrival database was missing the DWT for 1,050 vessels (nearly 15 percent of all vessels included in the U.S. East Coast arrivals). For these vessels we estimated DWT using regression analysis by 15 vessel type. The modeled DWT as a function of the vessel type and gross tons including interactive term “gross tons*vessel type”. Regressions were based on 5,886 vessels with both DWT and GRT. The regression results included an R-squared of 92.5 percent; parameter estimates were statistically significant for 11 vessel types that account for 98.3 of total vessel arrivals. (Appendix A, Attachment 5).

Vessel Arrivals by ANPR Port Region and Port Area

Based on the US Coast Guard data, there were 26,294 vessel arrivals of vessels 150 gross registered tons or greater at U.S. East Coast ports in 2002 (Table 2-1). For 2003, vessel arrivals increased by 4.7 percent to 27,541 vessel arrivals. For both years, the largest number of vessel arrivals was recorded in the ANPR Port Region of Mid-Atlantic-Ports of New York /New Jersey with 5,367 vessel arrivals and 5,676 vessel arrivals in 2002 and 2003, respectively.

The Mid-Atlantic-Chesapeake Bay is the next most important ANPR Port Region in terms of vessel arrivals approximately 4,600 vessel arrivals each year. The ports of Baltimore, Norfolk and Hampton Roads are included in this ANPR Port Region. Other significant ANPR Port Regions with more than 2,000 vessel arrivals in 2003 include Southeastern U.S. (4,114 vessel arrivals), Mid-Atlantic Savannah GA (2,618 vessel arrivals), Mid-Atlantic Delaware Bay (2,530 vessel arrivals), Mid-Atlantic Block Island Sound (2,487 vessel arrivals), Mid-Atlantic-Charleston (2,462 vessel arrivals) and Northeastern U.S.-Gulf of Maine (2,013) vessel arrivals.

In terms of ANPR Port Areas, New York City had the most vessel arrivals (5,676 arrivals in 2003), followed by Hampton Roads (2,658 arrivals), Philadelphia (2,530 arrivals), Jacksonville (2,420 arrivals), Charleston (2,361 arrivals), Baltimore (1,913 arrivals) and Portland, ME (1,490 arrivals).

Table 2-2. Vessel Arrivals by ANPR Port Region and Port Area, 2002 and 2003

ANPR Port Region and Port Area	2002	2003
Northeastern US - Gulf of Maine		
Eastport, ME	32	41
Portland, ME	694	1,490
Portsmouth, NH	187	277
Searsport, ME	234	205
Subtotal	1,147	2,013
Northeastern US - Off Race Point		
Boston, MA	861	390
Salem, MA	25	9
Subtotal	886	399
Northeastern US - Cape Cod Bay		
Cape Cod, MA	23	22
Subtotal	23	22
Mid-Atlantic Block Island Sound		
Bridgeport, CT	219	360
Long Island, NY	430	882
New Bedford, MA	125	111
New Haven, CT	443	606
New London, CT	56	146
Providence, RI	297	357
Subtotal	1,570	2,462
Mid-Atlantic Ports of New York/New Jersey		
New York City, NY	5,367	5,676
Subtotal	5,367	5,676
Mid-Atlantic Delaware Bay		
Philadelphia, PA	2,721	2,530
Subtotal	2,721	2,530
Mid-Atlantic Chesapeake Bay		
Baltimore, MD	1,946	1,913
Hampton Roads, VA	2,720	2,658
Subtotal	4,666	4,571
Mid-Atlantic Morehead City and Beaufort, NC		
Morehead City, NC	56	126
Subtotal	56	126
Mid-Atlantic Wilmington, NC		
Wilmington, NC	737	646
Subtotal	737	646
Mid-Atlantic Georgetown, SC		
Georgetown, SC	78	3
Subtotal	78	3
Mid-Atlantic Charleston, SC		
Charleston, SC	2,510	2,361
Subtotal	2,510	2,361
Mid-Atlantic Savannah, GA		
Savannah, GA	2,448	2,618
Subtotal	2,448	2,618
Southeastern US		
Brunswick, GA	539	494
Fernandina, FL	284	267
Jacksonville, FL	2,480	2,420
Port Canaveral, FL	782	933
Subtotal	4,085	4,114
All ANPR Port Areas	26,294	27,541

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003

U.S. East Coast Vessel Arrivals by Vessel Type

There is a great diversity in the type of vessels that call at U.S. East Coast ports. The USCG vessel characteristics file contains four fields that help identify vessel type: vessel class, vessel type, vessel subtype, vessel service. The USCG database includes 16 vessel classes, 48 vessel types, 35 vessel sub-types, and 21 vessel services. Table 2-3 presents the set of 12 summary vessel type categories that we defined for this study based on the information provided in the four USCG vessel description fields.

Table 2-3. Vessel Types Used

Bulk Carriers
Combination Carriers
Containerships
Freight Barges
General Cargo Vessels
Passenger Vessels
Refrigerated Cargo Vessels
Ro-Ro Cargo Vessels
Tank Barges
Tank Ship
Towing Vessels
Other a/

a/ Includes fishing vessels, industrial vessels, research vessels and school ships.

Source: Appendix A, Attachment 6.

Containerships accounted for the largest number of U.S. East Coast vessel arrivals with 8,972 arrivals in 2002 and 9,215 arrivals in 2003 (Table 2-4). Tank ship was the next most frequent vessel type with 5,321 arrivals in 2002 and 5,755 in 2003. Other significant vessel types include Ro-Ro cargo vessels (3,504 arrivals in 2003), bulk carriers (3,114 arrivals), and general cargo vessels (1,883 arrivals). These top 5 vessel types accounted for 85 percent of total vessel arrivals in 2003.

Table 2-4. U.S. East Coast Vessel Arrivals by Vessel Type, 2002 and 2003

Vessel Type	2002	2003
Bulk Carriers	3,088	3,114
Combination Carriers	146	167
Containerships	8,972	9,215
Freight Barges	279	252
General Cargo Vessels	2,159	1,883
Passenger Vessels	1,045	1,197
Refrigerated Cargo Vessels	520	650
Ro-Ro Cargo Vessels	3,512	3,504
Tank Barges	746	1,251
Tank Ships	5,321	5,755
Towing Vessels	418	462
Other	88	91
Total	26,294	27,541

Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database.

A detailed set of tables on vessel arrivals by type of vessel for each ANPR port region and port area is presented in Appendix B.

U.S. East Coast Vessel Arrivals by Size of Vessel

The size of vessels calling at U.S. East Coast ports can vary considerably depending on a number of factors including cargo and vessel type, length of ocean voyage, port and channel draft limitations at the loading or unloading port, customers preferred consignment size, and vessel routing considerations.

VESSEL SIZE BY PORT AREA

Table 2-5 presents U.S. East Coast vessel arrivals by ANPR Port Region, Port Area and DWT size ranges for 2002 and 2003. For the U.S. East Coast as a whole, about 37 percent of the vessel arrivals are of vessels below 20,000 DWT, approximately 25 percent of vessel arrivals are between 20,000 and 40,000 DWT; 25 percent between 40,000 and 60,000 DWT; and 13 percent over 60,000 DWT.

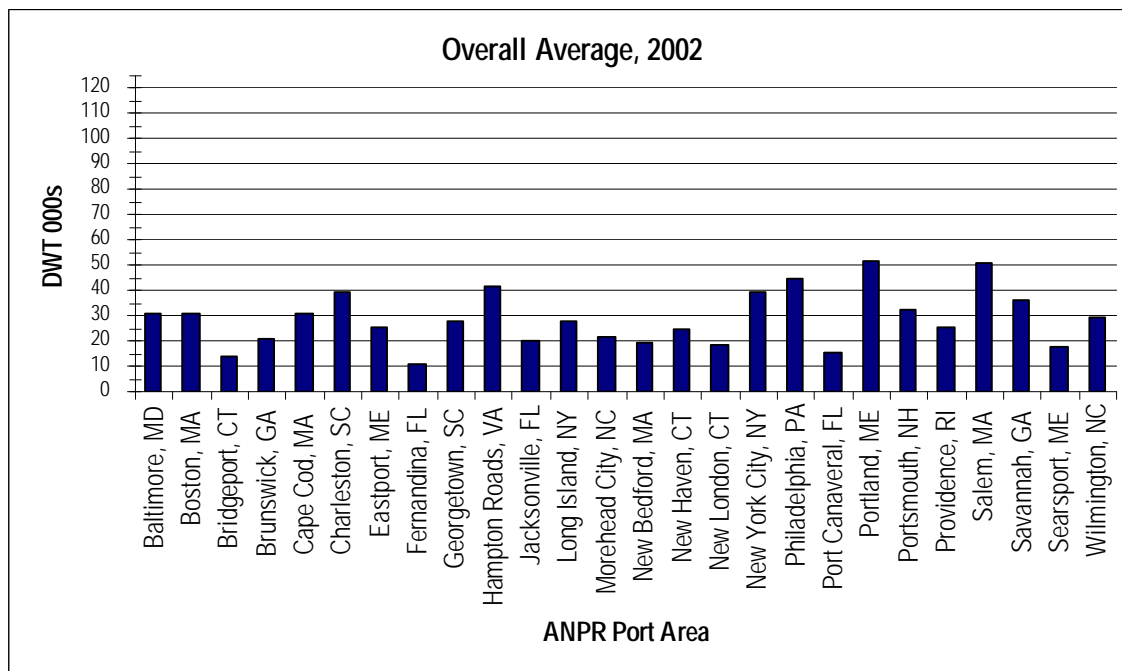
Table 2-5. Vessel Arrivals by ANPR Port Region, Port Area and DWT, 2002-2003

ANPR Port Region and Port Area	2002					2003				
	DWT				Total	DWT				Total
	0 - 19,999	20,000 - 39,999	40,000 - 59,999	60,000 and Greater		0 - 19,999	20,000 - 39,999	40,000 - 59,999	60,000 and Greater	
Northeastern US - Gulf of Maine										
Eastport, ME	17	5	10	-	32	24	3	14	-	41
Portland, ME	221	148	74	251	694	488	409	273	320	1,490
Portsmouth, NH	54	86	39	8	187	35	116	107	19	277
Searsport, ME	163	56	15	-	234	140	44	18	3	205
Subtotal	455	295	138	259	1,147	687	572	412	342	2,013
Northeastern US - Off Race Point										
Boston, MA	310	274	232	45	861	110	112	128	40	390
Salem, MA	3	4	8	10	25	1	1	5	2	9
Subtotal	313	278	240	55	886	111	113	133	42	399
Northeastern US - Cape Cod Bay										
Cape Cod, MA	12	2	3	6	23	9	-	3	10	22
Subtotal	12	2	3	6	23	9	-	3	10	22
Mid-Atlantic Block Island Sound										
Bridgeport, CT	196	7	10	6	219	309	4	20	27	360
Long Island, NY	298	34	11	87	430	702	74	9	97	882
New Bedford, MA	71	45	4	5	125	47	33	12	19	111
New Haven, CT	202	128	111	2	443	328	136	135	7	606
New London, CT	38	10	8	-	56	104	19	23	-	146
Providence, RI	136	103	51	7	297	176	76	92	13	357
Subtotal	941	327	195	107	1,570	1,666	342	291	163	2,462
Mid-Atlantic Ports of New York/New Jersey										
New York City, NY	1,403	1,339	1,797	828	5,367	1,412	1,361	1,926	977	5,676
Subtotal	1,403	1,339	1,797	828	5,367	1,412	1,361	1,926	977	5,676
Mid-Atlantic Delaware Bay										
Philadelphia, PA	1,173	634	257	657	2,721	1,132	485	300	613	2,530
Subtotal	1,173	634	257	657	2,721	1,132	485	300	613	2,530
Mid-Atlantic Chesapeake Bay										
Baltimore, MD	773	584	421	168	1,946	797	506	428	182	1,913
Hampton Roads, VA	476	749	1,059	436	2,720	433	757	944	524	2,658
Subtotal	1,249	1,333	1,480	604	4,666	1,230	1,263	1,372	706	4,571
Mid-Atlantic Morehead City and Beaufort, NC										
Morehead City, NC	25	24	6	1	56	33	74	15	4	126
Subtotal	25	24	6	1	56	33	74	15	4	126
Mid-Atlantic Wilmington, NC										
Wilmington, NC	276	190	224	47	737	205	166	248	27	646
Subtotal	276	190	224	47	737	205	166	248	27	646
Mid-Atlantic Georgetown, SC										
Georgetown, SC	34	17	26	1	78	1	-	2	-	3
Subtotal	34	17	26	1	78	1	-	2	-	3
Mid-Atlantic Charleston, SC										
Charleston, SC	393	765	1,129	223	2,510	386	710	1,030	235	2,361
Subtotal	393	765	1,129	223	2,510	386	710	1,030	235	2,361
Mid-Atlantic Savannah, GA										
Savannah, GA	550	743	908	247	2,448	543	719	1,015	341	2,618
Subtotal	550	743	908	247	2,448	543	719	1,015	341	2,618
Southeastern US										
Brunswick, GA	330	157	45	7	539	307	125	58	4	494
Fernandina, FL	256	6	22	-	284	236	5	26	-	267
Jacksonville, FL	1,532	547	338	63	2,480	1,491	481	395	53	2,420
Port Canaveral, FL	659	74	35	14	782	799	73	51	10	933
Subtotal	2,777	784	440	84	4,085	2,833	684	530	67	4,114
All ANPR Port Areas	9,601	6,731	6,843	3,119	26,294	10,248	6,489	7,277	3,527	27,541

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

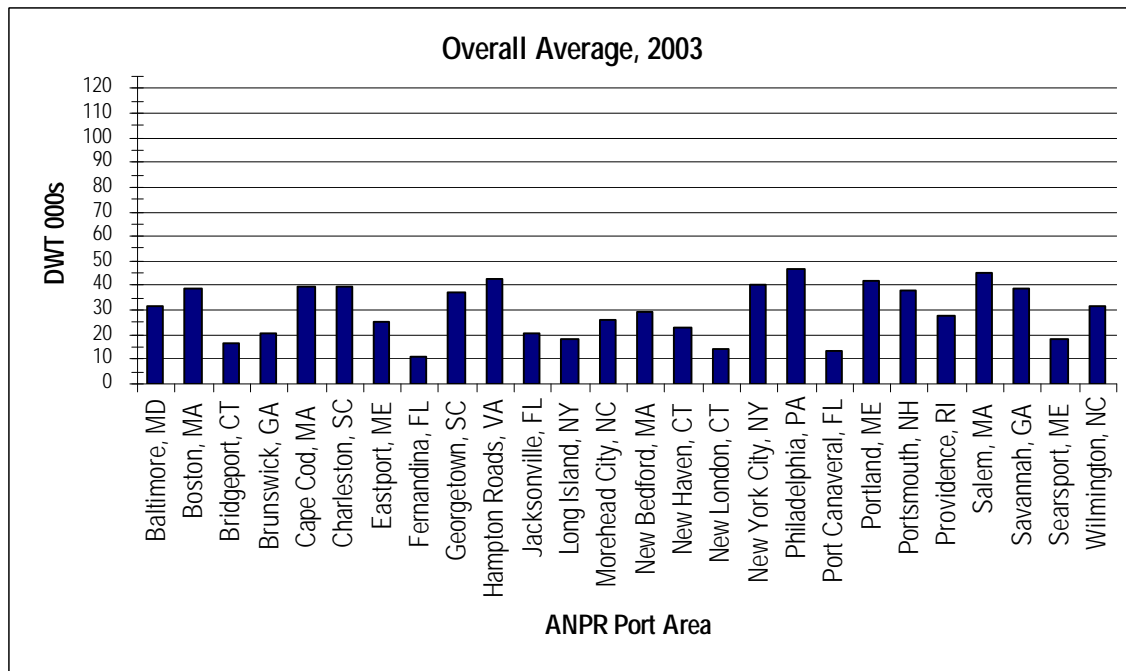
In 2002, the port area of Portland, ME had the highest average vessel DWT on the U.S. East Coast with an average of nearly 51,732 DWT (Figure 2-1). The port area of Salem, MA was second with an average of 50,682 DWT. Large tank ships bringing principally fuel oil for local power plants account for more than 50 percent of the arrivals for both of these port areas. High average vessel DWT are also reported for the port area of Philadelphia (44,834 DWT in 2002), and Hampton Roads (41,522 DWT). The average vessel DWT by port area was similar for 2003 (Figure 2-2).

Figure 2-1. Average Vessel DWT by ANPR Port Area, 2002



Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database.

Figure 2-2. Average Vessel DWT by ANPR Port Area, 2003



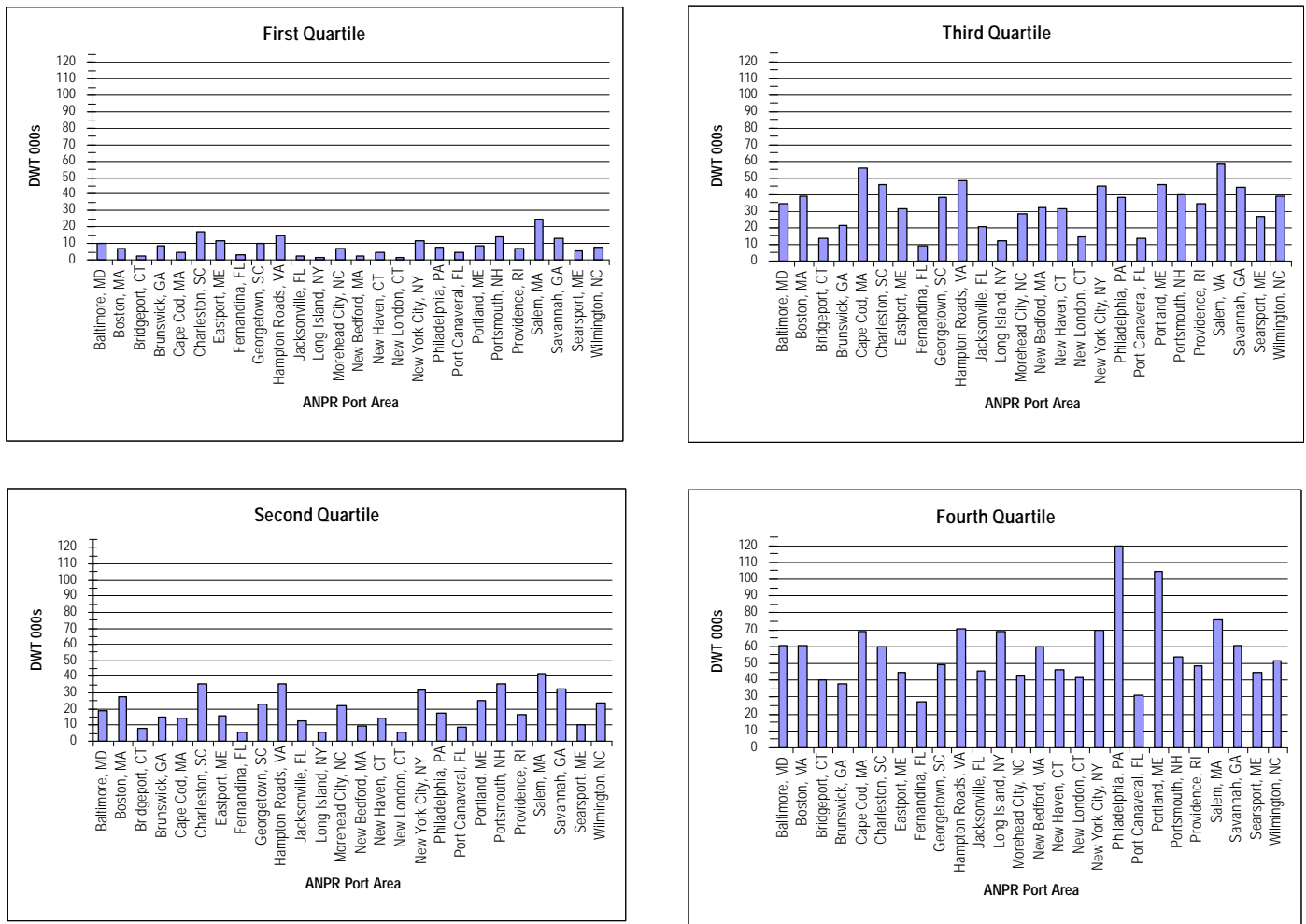
Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database.

The overall average vessel DWT by port area can sometimes mask a significant size difference of smaller and larger vessels calling at port. For this reason, we have analyzed average vessel size by DWT quartile for each of the ANPR port areas. Thus the average DWT for the smallest 25 percent of vessels calling at each port area in 2002-2003 is presented in Figure 2-3, quartile 1. The second smallest 25 percent of vessels is presented as quartile 2, etc.

For most port areas, there appears to be an orderly and graduated increase in the average vessel DWT by DWT quartile. In the second quartile, the port areas of Hampton Roads, VA and Salem, MA exhibit large jumps in average vessel DWT. In the case of Hampton Roads, it is an indication of the importance of bulk cargoes handled at the port and the predominance of large vessels even within the second DWT quartile. For Salem, it is the combination of a small number of overall vessel arrivals and the use of dry bulk vessels at the port.

In the fourth quartile, the port areas of Philadelphia, PA and Portland, ME demonstrate dramatic increases. For Philadelphia this is due to the very large liquid tank ships in excess of 160,000 DWT that call at the port area which includes Delaware Bay. For Portland this is due to the 120,000 DWT tankers that provide fuel oil to local power plants.

Figure 2-3. Average Vessel DWT by Quartile and ANPR Port Area, 2002-2003

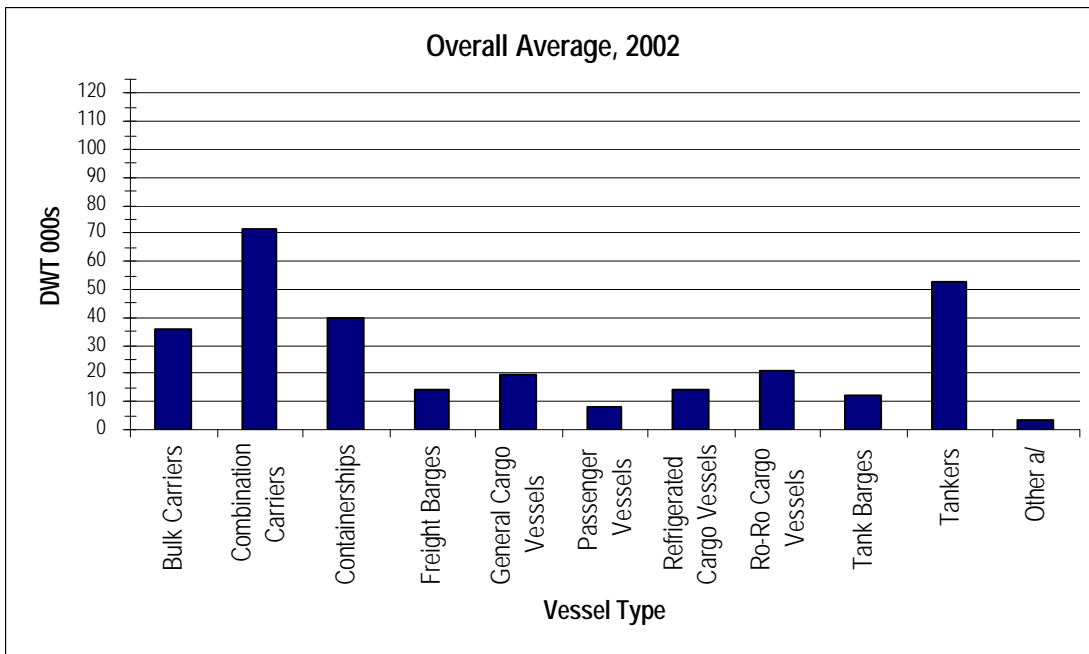


Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database

VESSEL SIZE BY VESSEL TYPE

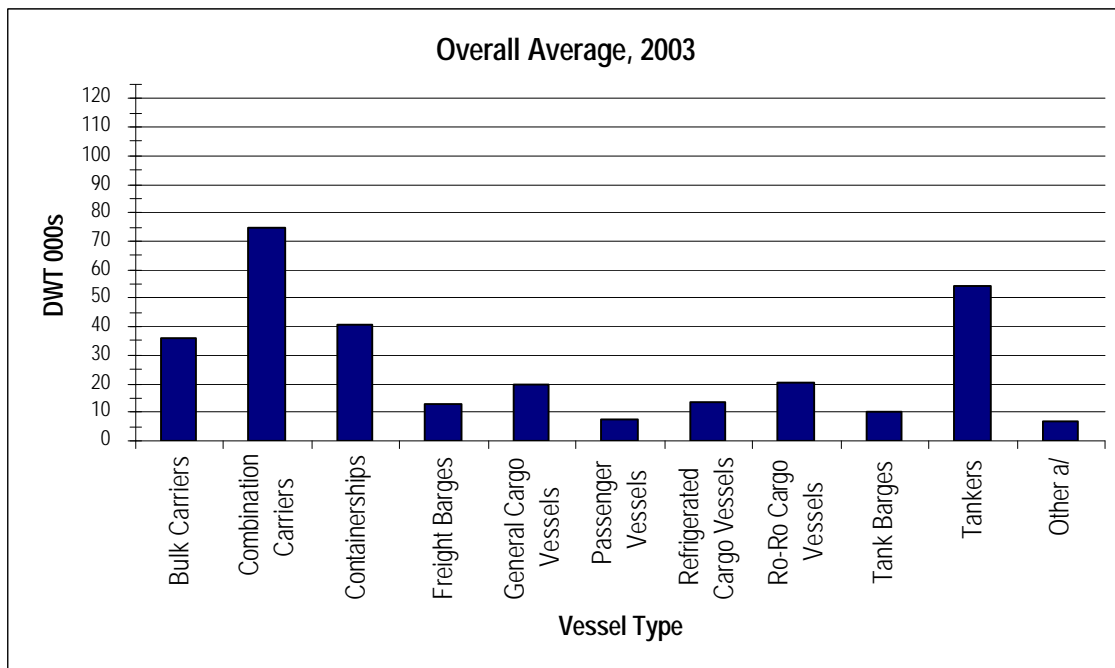
It is also interesting to review average vessel size by type of vessel. The overall average DWT by vessel type for U.S. East Coast ports for 2002 and 2003 are presented in Figure 2-4 and Figure 2-5, respectively. In terms of overall average size, combination carriers are the largest with an average of 71,720 DWT in 2002 and 74,664 DWT in 2003. Tank ships are next with an average of 53,001 DWT in 2002 and 54,645 DWT in 2003. The average containership was 39,818 DWT in 2002 and 40,987 DWT in 2003. Dry bulk carriers were the only other vessel type with an average DWT in excess of 30,000 DWT registering 35,490 DWT in 2002 and 36,265 DWT in 2003.

Figure 2-4. U.S. East Coast Ports: Average Vessel DWT by Vessel Type, 2002



Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database

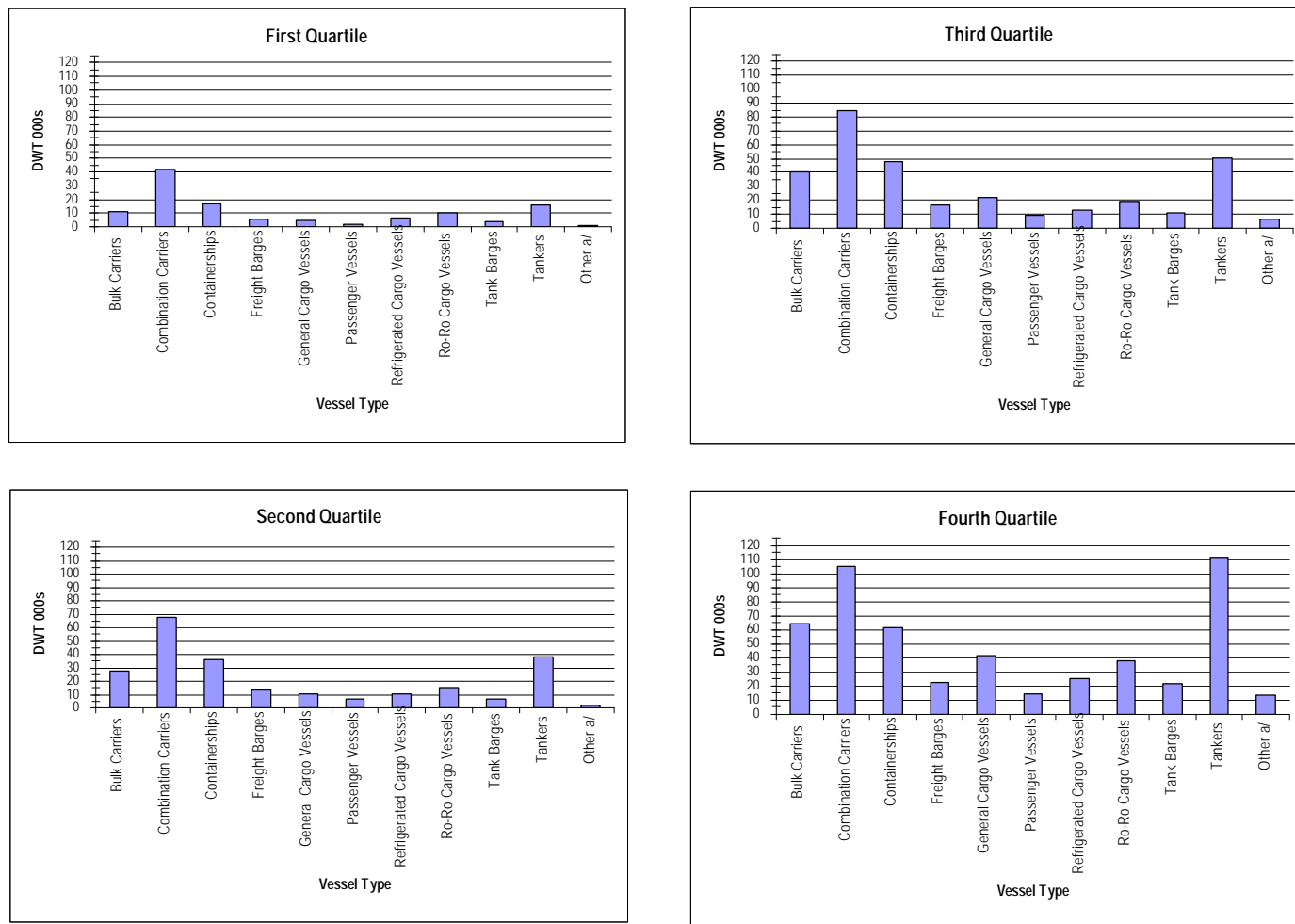
Figure 2-5. U.S. East Coast Ports: Average Vessel DWT by Vessel Type, 2003



Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database

Figure 2-6 presents average vessel DWT by quartile for each vessel type during 2002-2003. Even in the first quartile, the average DWT for combination carriers is over 40,000 DWT more than double that of any other vessel type. In the second quartile, the average DWT of tank ships, containerships and bulk carriers show significant increases. The increases in average vessel DWT by vessel type in the third quartile appear moderate and orderly. In the fourth quartile, the substantial jump in the average DWT of tank ships to over 110,000 DWT is noteworthy.

Figure 2-6. U.S. East Coast: Average Vessel DWT by Quartiles and Vessel Type, 2002-2003



Source: Prepared by Nathan Associates Inc. as described in text from USCG Vessel Arrival Database

PASSENGER VESSELS

In 2002, there were 1,045 passenger vessel arrivals at U.S. East Coast ports and in 2003 there were 1,197 arrivals⁴ (Table 2-6). Passenger vessels consist principally of cruise ships and ferries.

The Southeastern U.S. region with 458 arrivals accounted for 44 percent of U.S. East Coast passenger vessel arrivals in 2002; in 2003 the Southeastern U.S. region had 586 passenger vessel arrivals, 49 percent of the total U.S. East Coast. By far the most important port area for passenger vessel arrivals is Port Canaveral, FL with 450 passenger vessel arrivals in 2002 and 567 arrivals in 2003. In 2002, over 95 percent of the passenger vessel arrivals in Port Canaveral were of vessels greater than 60,000 GRT, an indication of the importance of the cruise industry in that port area. Disney Cruise Line uses Port Canaveral as the home port for its 83,000 GRT Disney Magic and Disney Wonder vessels.

In 2003, Port Canaveral arrivals of vessels greater than 60,000 GRT increased by 4.5 percent to 455 arrivals; however in 2003 these vessels only represented 80 percent of the total passenger vessel arrivals. The change was due to an increase of passenger vessel arrivals of vessels below 20,000 GRT from 10 arrivals in 2002 to 106 arrivals in 2003 as the Mirage Cruise Line commenced twice weekly cruises to Grand Bahamas and Nassau with a 15,000 GRT 850-passenger vessel.

New York City is the ANPR port area with the second most passenger vessel arrivals with 198 arrivals in 2002 and 239 arrivals in 2003. Approximately 50 percent of the vessel arrivals are between 40,000 to 60,000 GRT.

U.S. East Coast Trade

The volume and value of goods carried by vessels calling at U.S. East Coast ports are other indicators of the economic significance of maritime activity that may be affected by the proposed rulemaking. We have analyzed the foreign trade statistics for 2002 and 2003 published by U.S. Census Bureau at a Custom District and port level. We have conducted further investigations to reconcile the reported volume and value of U.S. imports and exports by Customs District and port with USCG vessel arrivals by ANPR port region and port area (Table 2-7).

⁴ These figures exclude the ports of Miami and Fort Lauderdale and other smaller ports south of Port Canaveral that are outside the scope of the proposed rulemaking.

Table 2-6. Passenger Ship Arrivals by ANPR Port Region, Port Area and GRT, 2002-2003

ANPR Port Region and Port Area	2002					2003				
	Gross Registered Tonnage					Gross Registered Tonnage				
	0 - 19,999	20,000 - 39,999	40,000 - 59,999	60,000 and Greater	Total	0 - 19,999	20,000 - 39,999	40,000 - 59,999	60,000 and Greater	Total
Northeastern US - Gulf of Maine										
Portland, ME	2	8	5	9	24	-	3	6	12	21
Portsmouth, NH	-	-	-	-	-	1	-	-	-	1
Searsport, ME	5	4	33	14	56	3	14	29	21	67
Subtotal	7	12	38	23	80	4	17	35	33	89
Northeastern US - Off Race Point										
Boston, MA	8	3	60	20	91	1	2	15	2	20
Salem, MA	-	-	-	-	-	-	1	-	-	1
Subtotal	8	3	60	20	91	1	3	15	2	21
Northeastern US - Cape Cod Bay										
Cape Cod, MA	-	6	6	-	12	1	2	5	1	9
Subtotal	0	6	6	0	12	1	2	5	1	9
Mid-Atlantic Block Island Sound										
Bridgeport, CT	-	-	-	-	-	4	-	-	-	4
Long Island, NY	30	-	-	-	30	32	-	-	-	32
New Haven, CT	-	-	-	-	-	5	-	-	-	5
New London, CT	3	1	-	-	4	32	-	-	-	32
New Bedford, MA	15	14	-	-	29	-	-	-	-	-
Providence, RI	6	3	21	7	37	6	4	11	14	35
Subtotal	54	18	21	7	100	79	4	11	14	108
Mid-Atlantic Ports of New York/New Jersey										
New York City, NY	10	40	102	46	198	8	22	92	117	239
Subtotal	10	40	102	46	198	8	22	92	117	239
Mid-Atlantic Delaware Bay										
Philadelphia, PA	4	1	1	2	8	3	5	11	7	26
Subtotal	4	1	1	2	8	3	5	11	7	26
Mid-Atlantic Chesapeake Bay										
Baltimore, MD	3	1	7	26	37	3	7	1	30	41
Hampton Roads, VA	3	5	7	7	22	5	12	2	12	31
Subtotal	6	6	14	33	59	8	19	3	42	72
Mid-Atlantic Charleston, SC										
Charleston, SC	11	4	2	17	34	7	5	10	19	41
Subtotal	11	4	2	17	34	7	5	10	19	41
Mid-Atlantic Savannah, GA										
Savannah, GA	3	-	1	1	5	4	1	-	1	6
Subtotal	3	0	1	1	5	4	1	0	1	6
Southeastern US										
Brunswick, GA	-	-	-	-	-	1	-	-	-	1
Fernandina, FL	-	1	1	-	2	1	1	-	-	2
Jacksonville, FL	5	1	-	-	6	11	-	5	-	16
Port Canaveral, FL	10	10	-	430	450	106	4	2	455	567
Subtotal	15	12	1	430	458	119	5	7	455	586
All ANPR Port Regions	118	102	246	579	1,045	234	83	189	691	1,197

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table 2-7. Reconciliation of U.S. Customs Districts and Ports with ANPR Port Region and Port Area

U.S. Customs District and Port	ANPR Port Region	ANPR Port Area
01 Portland, ME		
0101 Portland, ME	Northeast- Gulf of Maine	Portland
0102 Bangor, ME	Northeast- Gulf of Maine	Searsport
0103 Eastport, ME	Northeast- Gulf of Maine	Eastport
0111 Bath, ME	Northeast- Gulf of Maine	Portland
0112 Bar Harbor, ME	Northeast- Gulf of Maine	Searsport
0121 Rockland, ME	Northeast- Gulf of Maine	Searsport
0122 Jonesport, ME	Northeast- Gulf of Maine	Searsport
0131 Portsmouth, NH	Northeast- Gulf of Maine	Portsmouth
0132 Belfast, ME	Northeast- Gulf of Maine	Searsport
0152 Searsport, ME	Northeast- Gulf of Maine	Searsport
04 Boston, MA		
0401 Boston, MA	Northeast- Off Race Point	Boston
0404 Gloucester, MA	Northeast- Off Race Point	Salem
0405 New Bedford, MA	Mid-Atlantic - Block Island Sound	New Bedford
0406 Plymouth, MA	Northeast- Off Race Point	Boston
0407 Fall River, MA	Mid-Atlantic - Block Island Sound	New Bedford
0408 Salem, MA	Northeast- Off Race Point	Salem
0409 Provincetown, MA	Northeast- Cape Cod	Cape Cod
0410 Bridgeport, CT	Mid-Atlantic - Block Island Sound	Bridgeport
0412 New Haven, CT	Mid-Atlantic - Block Island Sound	New Haven
0413 New London, CT	Mid-Atlantic - Block Island Sound	New London
05 Providence, RI		
0501 Newport, RI	Mid-Atlantic - Block Island Sound	Providence
0502 Providence, RI	Mid-Atlantic - Block Island Sound	Providence
0503 Melville, RI	Mid-Atlantic - Block Island Sound	Providence
10 New York City, NY		
1001 New York, NY	Mid-Atlantic - New York and New Jersey	New York City
1002 Albany, NY	Mid-Atlantic - New York and New Jersey	New York City
11 Philadelphia, PA		
1101 Philadelphia, PA	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1102 Chester, PA	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1103 Wilmington, DE	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1105 PA/US, NJ	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1107 Camden, NJ	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1113 Gloucester City, NJ	Mid-Atlantic Delaware Bay	PA, DE, South NJ
1195 UPS, Philadelphia, PA	Mid-Atlantic Delaware Bay	PA, DE, South NJ
13 Baltimore, MD		
1301 Annapolis, MD	Mid-Atlantic - Chesapeake Bay	Baltimore
1302 Cambridge, MD	Mid-Atlantic - Chesapeake Bay	Baltimore
1303 Baltimore, MD	Mid-Atlantic - Chesapeake Bay	Baltimore
1304 Crisfield, MD	Mid-Atlantic - Chesapeake Bay	Baltimore
14 Norfolk, VA		
1401 Norfolk, VA	Mid-Atlantic - Chesapeake Bay	Hampton Roads
1402 Newport News, VA	Mid-Atlantic - Chesapeake Bay	Hampton Roads
1404 Richmond-Petersburg, VA	Mid-Atlantic - Chesapeake Bay	Hampton Roads
1408 Hopewell, VA	Mid-Atlantic - Chesapeake Bay	Hampton Roads
15 Charlotte, NC		
1501 Wilmington, NC	Mid-Atlantic - Wilmington, NC	Wilmington
1511 Beaufort-Morehead City, NC	Mid-Atlantic - Morehead City	Morehead City
16 Charleston, SC		
1601 Charleston, SC	Mid-Atlantic - Charleston	Charleston
1602 Georgetown, SC	Mid-Atlantic - Georgetown	Georgetown
17 Savannah, GA		
1701 Brunswick, GA	Southeastern US	Brunswick
1703 Savannah, GA	Mid-Atlantic Savannah	Savannah
18 Tampa, FL		
1803 Jacksonville, FL	Southeastern US	Jacksonville
1805 Fernandina Beach, FL	Southeastern US	Fernandina Beach
1816 Port Canaveral, FL	Southeastern US	Port Canaveral

Source: Prepared by Nathan Associates Inc.

The U.S. Census Bureau data on U.S. imports of merchandise is compiled primarily from automated data submitted through the U.S. Customs' Automated Commercial System⁵. Data are compiled also from import entry summary forms, warehouse withdrawal forms and Foreign Trade Zone documents as required by law to be filed with the U.S. Customs Service. Information on U.S. exports of merchandise is compiled from copies of Shipper's Export Declarations (SEDs) and data from qualified exporters, forwarders or carriers. Copies of SEDs are required to be filed with Customs officials at the port of export.

For this study, the following data items have been used from the U.S. Census Bureau Foreign Trade Statistics:

- **Customs import value** – the value of imports appraised by the U.S. Customs Services in accordance with the legal requirements of the Tariff Act of 1930, as amended. This value is generally defined as the price actually paid or payable for merchandise when sold for exportation to the U.S. excluding U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the U.S.
- **Import charges** – the aggregate cost of all freight, insurance and other charges (excluding U.S. import duties) incurred in bringing the merchandise from alongside the carrier at the port of exportation and placing it alongside the carrier at the first port of entry in the U.S.
- **F.A.S. export value** – the free alongside ship value of exports at the U.S. seaport based on the transaction price, including inland freight, insurance and other charges incurred in placing the merchandise alongside the carrier at the U.S. port of exportation. The value, as defined, excludes the cost of loading the merchandise aboard the exporting carrier and also excludes freight, insurance and any other charges or transportation costs beyond the port of exportation.
- **Shipping weight** – the gross weight in metric tons including the weight of moisture content, wrappings, crates, boxes and containers.
- **District of exportation** – the customs district in which the merchandise is loaded on the vessel which takes the merchandise out of the country.
- **Import district of unloading** – the district where merchandise is unloaded from the importing vessel.

Table 2-8 and Table 2-9 present U.S. East Coast maritime imports and exports by ANPR port region and port area for 2002 and 2003 respectively⁶.

In 2002, the custom import value of merchandise imported by vessel on the U.S. East Coast was \$181.7 billion nearly triple the \$65. 2 billion value of exports⁷. The total value of trade on the U.S. East Coast in 2002 was

⁵ The description and definition of information from the U.S Census Bureau Foreign Trade Statistics is based on the Guide to Foreign Trade Statistics: Description of the Foreign Trade Statistical Program available on the U.S. census Bureau website.

⁶ Maritime trade refers to the method of transportation by which the merchandise arrived in or departed from the U.S.

⁷ Please note that for purposes of this study, ports south of Port Canaveral, FL are excluded from the data presented.

\$246.9 billion. The port area of New York City was the largest in terms of the value of imports (\$69.1 billion) and exports (\$20.7 billion). This port area accounted for 38 percent of the value of U.S. East Coast imports and 32 percent of exports.

The port areas of Charleston, Philadelphia, Baltimore and Hampton Roads constitute the next tier of port areas with value of imports ranging from \$17.5 billion and \$21.6 billion. For exports, the port areas of Hampton Roads and Charleston each recorded exports of \$11.9 billion in 2002, followed by the port area of Savannah with \$7.1 billion of exports.

For 2003, the value of imports on the U.S. East Coast increased by 14.5 percent to \$207.9 billion and the value of exports increased by 7.4 percent to \$70.0 billion. In 2003, the value of total trade increased by 12.6 percent to \$277.9 billion. The relative ranking of port areas in terms of value of imports and exports remained the same as in 2002.

The shipping weight of U.S maritime trade by ANPR port region and port area for 2002 and 2003 are also presented in Table 2-8 and Table 2-9. The total shipping weight of U.S East Coast imports was 221.8 million tons in 2002 with export shipments of 49.9 million tons. The port area of Philadelphia was the largest in terms of shipping weight of imports with 69.7 million tons in 2002 followed by New York City with 59.9 million tons. These two port areas account for 54 percent of the total U.S. East Coast import shipments by weight. For exports, Hampton Roads is first with 16.1 million tons followed by New York City with 10.2 million tons and Savannah with 7.6 million tons. The relative rankings by port area for 2003 are similar in terms of export tonnages.

The U.S. Census Bureau reports vessel import charges associated with import of merchandise by customs district.⁸ Vessel import charges represent the aggregate cost of all freight, insurance and other charges (excluding U.S. import duties) incurred in bringing the merchandise from alongside the carrier at the port of exportation and placing it alongside the carrier at the first port of entry.

In 2002, vessel import charges at U.S. East Coast customs districts totaled \$9.3 billion or 5.1 percent of the vessel import value (Table 2-10)⁹. In 2003, vessel import charges increased by 19 percent to \$11.1 billion, representing 5.3 percent of the vessel import value. In 2003, vessel import charges ranged from a high of 11.1 percent of vessel import value for the customs district of Charlotte, NC to a low of 2.6 percent for the customs district of Providence. Factors such as composition and volume of cargo, value of the merchandise per ton, distance of ocean voyage, size and type of vessel used, and port charges affect the relative importance of vessel import charges at a customs district level.

⁸ As vessel import charges are not reported by the U.S. Census Bureau at the port level, we have analyzed these charges only at the customs district level. The data presented does not precisely correspond to the vessel import values shown in Tables 8 and 9 by port area as we had excluded in those tables ports included in custom district that are outside the scope of this study.

⁹ Vessel import value is equivalent to custom import value for merchandise transported by vessels.

Table 2-8. U.S. East Coast Maritime Trade by ANPR Port Region and Port Area, 2002

ANPR Port Region and Port Area	Imports		Exports		Total Trade	
	Custom import value (\$ millions)	Shipping Weight (m.t. 000s)	F.A.S. export value (\$ millions)	Shipping Weight (m.t. 000s)	Merchandise Value (\$ millions)	Shipping Weight (m.t. 000s)
Gulf of Maine						
Eastport, ME	0.0	0.0	103.4	280.1	103.4	280.1
Searsport, ME	211.7	1,069.1	9.5	3.8	221.2	1,072.9
Portland, ME	717.3	2,844.8	77.6	134.6	794.9	2,979.4
Portsmouth, NH	369.5	3,313.8	111.0	72.2	480.5	3,386.0
Subtotal	1,298.5	7,227.7	301.5	490.8	1,600.0	7,718.5
Racepoint, MA						
Salem, MA	32.7	740.3	4.1	1.1	36.9	741.4
Boston, MA	5,133.8	12,620.2	773.9	668.7	5,907.7	13,288.9
Subtotal	5,166.5	13,360.5	778.0	669.8	5,944.6	14,030.3
Cape Cod, MA						
Cape Cod, MA	0.0	0.0	-	-	0.0	0.0
Subtotal	0.0	0.0	-	-	0.0	0.0
Block Island Sound						
New Bedford, MA	91.9	856.8	2.8	1.4	94.7	858.2
Providence, RI	1,014.1	2,644.4	44.9	377.2	1,059.0	3,021.7
New London, CT	132.6	161.8	0.5	0.3	133.1	162.1
New Haven, CT	953.2	2,700.9	25.0	199.7	978.1	2,900.6
Bridgeport, CT	141.2	937.4	3.8	1.3	145.1	938.6
Subtotal	2,333.0	7,301.3	76.9	579.9	2,409.9	7,881.2
New York						
New York City, NY	69,052.6	59,933.9	20,759.2	10,179.2	89,811.9	70,113.1
Subtotal	69,052.6	59,933.9	20,759.2	10,179.2	89,811.9	70,113.1
Delaware Bay						
Philadelphia, PA	19,038.7	69,712.7	2,130.6	1,214.6	21,169.3	70,927.3
Subtotal	19,038.7	69,712.7	2,130.6	1,214.6	21,169.3	70,927.3
Chesapeake Bay						
Hampton Roads, VA	17,476.7	10,370.5	11,907.5	16,061.5	29,384.2	26,432.0
Baltimore, MD	17,946.6	16,290.1	4,938.3	4,674.3	22,884.8	20,964.5
Subtotal	35,423.2	26,660.6	16,845.8	20,735.8	52,269.0	47,396.4
Morehead City, NC						
Morehead City, NC	194.6	544.9	286.7	136.8	481.3	681.7
Subtotal	194.6	544.9	286.7	136.8	481.3	681.7
Wilmington, NC						
Wilmington, NC	1,237.6	2,587.3	1,057.4	821.1	2,294.9	3,408.4
Subtotal	1,237.6	2,587.3	1,057.4	821.1	2,294.9	3,408.4
Georgetown, SC						
Georgetown, SC	61.2	854.9	24.3	45.0	85.5	899.9
Subtotal	61.2	854.9	24.3	45.0	85.5	899.9
Charleston, SC						
Charleston, SC	21,638.7	11,923.2	11,893.3	5,429.4	33,531.9	17,352.6
Subtotal	21,638.7	11,923.2	11,893.3	5,429.4	33,531.9	17,352.6
Savannah, GA						
Savannah, GA	12,719.6	10,122.4	7,047.9	7,620.8	19,767.5	17,743.2
Subtotal	12,719.6	10,122.4	7,047.9	7,620.8	19,767.5	17,743.2
Southeastern U.S.						
Brunswick, GA	4,327.2	972.2	531.5	730.0	4,858.7	1,702.2
Fernandina, FL	117.1	116.6	167.5	180.5	284.6	297.1
Jacksonville, FL	8,699.4	8,218.6	3,235.9	933.3	11,935.3	9,151.8
Port Canaveral, FL	374.8	2,262.4	107.4	155.6	482.2	2,418.0
Subtotal	13,518.5	11,569.7	4,042.3	1,999.4	17,560.8	13,569.1
All ANPR Port Areas	181,682.7	221,799.2	65,243.9	49,922.5	246,926.6	271,721.7

Source: Prepared by Nathan Associates from U.S. Census Bureau Foreign Trade Statistics for 2002 and 2003 as described in text.

Table 2-9. U.S. East Coast Maritime Trade by ANPR Port Region and Port Area, 2003

ANPR Port Region and Port Area	Imports		Exports		Total Trade	
	Custom import value (\$ millions)	Shipping Weight (m.t. 000s)	F.A.S. export value (\$ millions)	Shipping Weight (m.t. 000s)	Merchandise Value (\$ millions)	Shipping Weight (m.t. 000s)
Gulf of Maine						
Eastport, ME	0.0	0.0	133.3	309.7	133.3	309.7
Searsport, ME	295.4	1,342.7	5.6	2.0	301.0	1,344.7
Portland, ME	892.6	3,330.4	122.9	187.4	1,015.4	3,517.8
Portsmouth, NH	576.9	4,329.3	74.6	149.5	651.5	4,478.9
Subtotal	1,764.9	9,002.5	336.3	648.6	2,101.2	9,651.1
Racepoint, MA						
Salem, MA	29.4	790.9	9.4	4.2	38.8	795.1
Boston, MA	5,126.5	15,893.1	798.8	821.1	5,925.3	16,714.3
Subtotal	5,155.8	16,684.1	808.2	825.3	5,964.1	17,509.4
Cape Cod, MA						
Cape Cod, MA	0.0	0.0	0.1	0.0	0.1	0.0
Subtotal	0.0	0.0	0.1	0.0	0.1	0.0
Block Island Sound						
New Bedford, MA	135.9	2,087.1	7.9	5.2	143.8	2,092.3
Providence, RI	2,665.2	4,522.9	61.3	296.4	2,726.5	4,819.3
New London, CT	149.5	193.3	11.3	56.2	160.9	249.5
New Haven, CT	961.6	2,764.0	35.3	234.7	996.9	2,998.7
Bridgeport, CT	146.0	1,677.8	2.0	6.5	148.0	1,684.4
Subtotal	4,058.4	11,245.1	117.7	599.0	4,176.1	11,844.0
New York						
New York City, NY	78,601.0	68,879.8	21,760.0	9,585.8	100,361.0	78,465.5
Subtotal	78,601.0	68,879.8	21,760.0	9,585.8	100,361.0	78,465.5
Delaware Bay						
Philadelphia, PA	21,817.7	71,221.2	2,080.8	1,768.0	23,898.5	72,989.2
Subtotal	21,817.7	71,221.2	2,080.8	1,768.0	23,898.5	72,989.2
Chesapeake Bay						
Hampton Roads, VA	20,885.7	11,357.2	12,245.2	17,242.8	33,130.9	28,600.0
Baltimore, MD	20,412.1	17,726.0	5,753.1	4,708.8	26,165.2	22,434.8
Subtotal	41,297.8	29,083.2	17,998.3	21,951.7	59,296.1	51,034.8
Morehead City, NC						
Morehead City, NC	226.7	463.8	359.6	40.2	586.4	504.1
Subtotal	226.7	463.8	359.6	40.2	586.4	504.1
Wilmington, NC						
Wilmington, NC	1,250.7	3,337.1	953.2	730.1	2,203.9	4,067.2
Subtotal	1,250.7	3,337.1	953.2	730.1	2,203.9	4,067.2
Georgetown, SC						
Georgetown, SC	37.1	610.7	24.3	47.3	61.3	658.0
Subtotal	37.1	610.7	24.3	47.3	61.3	658.0
Charleston, SC						
Charleston, SC	26,063.4	11,886.0	13,483.2	5,399.4	39,546.7	17,285.3
Subtotal	26,063.4	11,886.0	13,483.2	5,399.4	39,546.7	17,285.3
Savannah, GA						
Savannah, GA	13,630.7	11,888.7	7,634.1	8,134.9	21,264.8	20,023.6
Subtotal	13,630.7	11,888.7	7,634.1	8,134.9	21,264.8	20,023.6
Southeastern U.S.						
Brunswick, GA	4,679.6	1,138.3	657.5	689.5	5,337.1	1,827.8
Fernandina, FL	79.4	92.8	194.6	239.7	274.0	332.5
Jacksonville, FL	8,884.0	8,826.5	3,475.7	942.9	12,359.7	9,769.5
Port Canaveral, FL	355.4	2,647.4	127.8	131.1	483.2	2,778.5
Subtotal	13,998.3	12,705.1	4,455.6	2,003.2	18,454.0	14,708.3
All ANPR Port Areas	207,902.6	247,007.2	70,011.5	51,733.4	277,914.1	298,740.7

Source: Prepared by Nathan Associates from U.S. Census Bureau Foreign Trade Statistics for 2002 and 2003 as described in text.

Table 2-10. U.S. East Coast: Vessel Import Charges as a Percent of Vessel Import Value by Customs District of Unlading, 2002 and 2003

Custom District of Unlading	2002			2003		
	Vessel Import Value (Millions of Dollars)	Vessel Import Charges (Millions of Dollars)	Percent of Vessel Import Value	Vessel Import Value (Millions of Dollars)	Vessel Import Charges (Millions of Dollars)	Percent of Vessel Import Value
1 Portland, ME	\$1,302	\$59	4.5%	\$1,765	\$86	4.9%
4 Boston, MA	\$6,492	\$276	4.2%	\$6,549	\$341	5.2%
5 Providence, RI	\$1,014	\$40	4.0%	\$2,665	\$68	2.6%
10 New York City, NY	\$69,053	\$3,421	5.0%	\$78,601	\$4,046	5.1%
11 Philadelphia, PA	\$19,039	\$1,208	6.3%	\$21,818	\$1,507	6.9%
13 Baltimore, MD	\$17,947	\$654	3.6%	\$20,412	\$735	3.6%
14 Norfolk, VA	\$17,477	\$935	5.3%	\$20,886	\$1,143	5.5%
15 Charlotte, NC	\$1,432	\$146	10.2%	\$1,477	\$165	11.1%
16 Charleston, SC	\$21,700	\$990	4.6%	\$26,101	\$1,231	4.7%
17 Savannah GA	\$17,047	\$1,051	6.2%	\$18,310	\$1,222	6.7%
18 Tampa, FL	\$10,873	\$491	4.5%	\$11,357	\$566	5.0%
Total	\$183,375	\$9,270	5.1%	\$209,941	\$11,112	5.3%

Source: Prepared by Nathan Associates Inc. from U.S. Census Bureau, Foreign Trade Statistics for 2002 and 2003.

3. Potential Economic Impacts

The proposed speed restrictions contained in the ANPR will directly affect vessels that call at U.S. East Coast ports¹⁰. In this chapter we discuss the general approach employed to identify and estimate the potential economic impact, analyze affected vessel traffic, and present the key features of our economic impact model. We also report the potential economic impact by component and describe the results within the economic context of U.S. East Coast maritime trade and shipping.

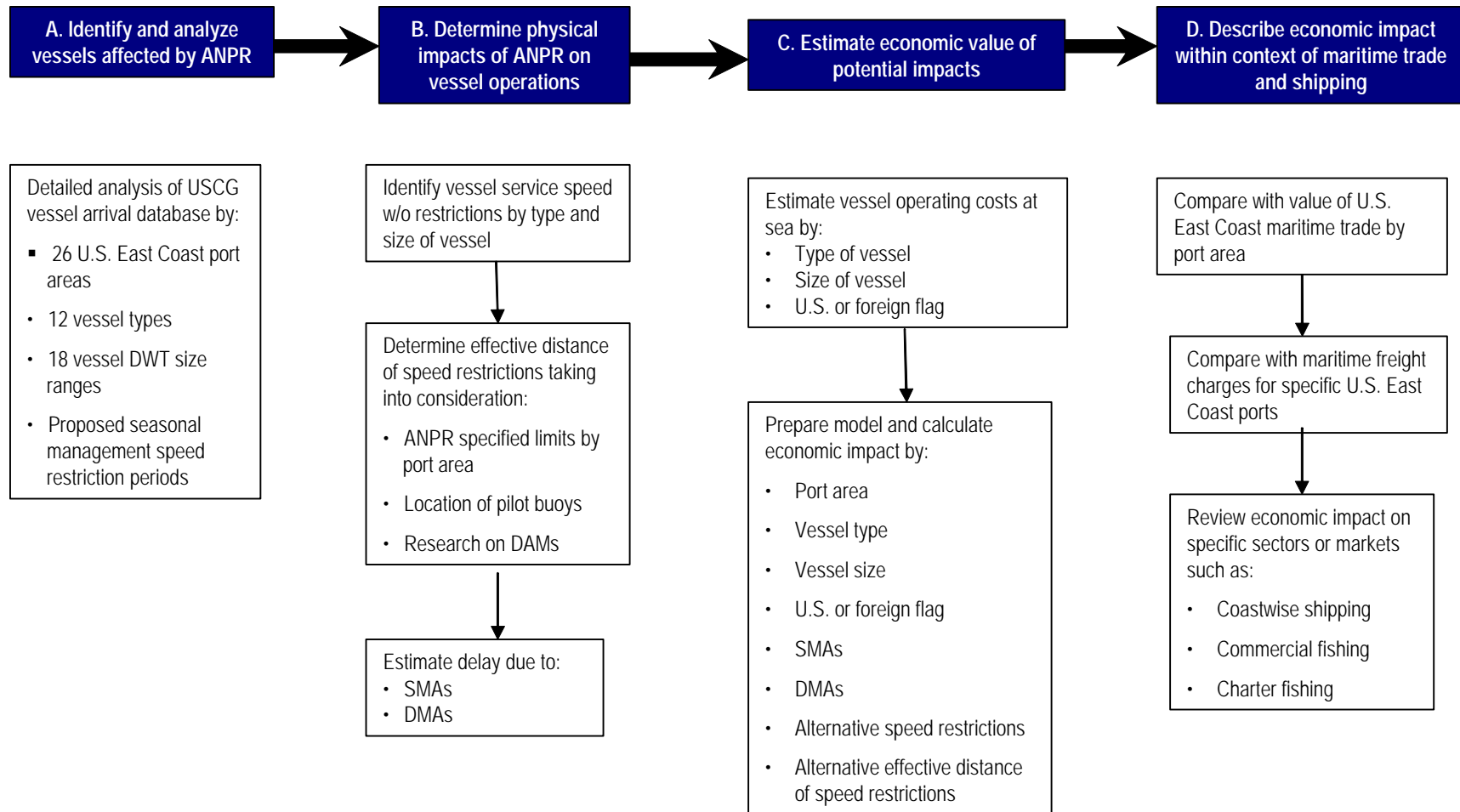
General Approach

Our approach for the estimation of the potential economic impact of the proposed ANPR has been designed so that results can be identified and analyzed at a summary level or disaggregated by port area, vessel type, vessel size, and vessel flag. In addition, the estimated potential impact is reported separately for seasonal speed restriction periods and for dynamic management area (DMA) measures. An ancillary benefit of this approach is that it also enhances the accuracy and rigor of the analysis. Key factors such as vessel operating speed vary significantly by vessel type and size; vessel operating costs vary by those vessel characteristics as well as flag of registry.

As depicted in Figure 3-1, our general approach is organized into the following four principal tasks:

¹⁰ This analysis uses the same definition for U.S. East Coast ports as was presented in Chapter 2; that being from Port Canaveral, FL to the northernmost U.S. jurisdiction in the Gulf of Maine.

Figure 3-1. General Approach



Task A. Identify and analyze vessels affected by ANPR. Detailed information regarding vessels 150 GRT or higher calling at U.S. East Coast ports during 2002 and 2003 was obtained from the U.S. Coast Guard vessel arrival database.¹¹ Vessel calls were analyzed for 26 port areas on the U.S. East Coast, 12 vessel types, 18 vessel DWT size ranges and U.S. and foreign flag registration.

Task B. Determine physical impacts of ANPR on vessel operations. Key information include vessel service speed by type and size of vessel and the effective distance of proposed seasonal speed restrictions by port area, including consideration of the location of pilot buoys. Also the effective distance and periods for proposed DMA measures were specified based on available research. Results of this task include estimate of minutes of delay per vessel arrival for seasonal speed restrictions.

Task C. Estimate economic value of potential impacts. Key data include vessel operating costs at sea by type and size of vessel and whether U.S. or foreign flag registry. Results include detailed estimates of potential economic impact of proposed speed restrictions by port area, vessel type, vessel DWT size range, flag of registration. Sensitivity analyses of alternative assumptions regarding speed restrictions ranging from 10-14 knots and the effective distance of seasonal speed restrictions were conducted¹².

Task D. Describe economic impact within context of U.S. East Coast maritime trade and shipping. For each port area, the estimated potential economic impact is assessed relative to the value of maritime trade and relative to maritime freight charges during proposed seasonal and DMA speed restriction periods.

In accordance with the study's scope, the analysis is conducted from the perspective to determine the potential economic impact if the proposed ANPR measures were in place during a recent period where data is available; in this case 2002 and 2003. The study has not prepared forecasts of U.S. East Coast traffic or changes in vessel traffic patterns associated with recent proposed coastal shipping initiatives. Similarly the study does not identify the potential economic impact associated with increased populations of right whales over time as a result of the ANPR.

Vessels Affected by Proposed ANPR Protection Measures

The ANPR calls for the establishment of new operational measures for the shipping industry including consideration of routing and speed restrictions. Operational measures include seasonal speed restrictions for specific U.S. East Coast port areas during particularly sensitive periods when whales are typically present. The

¹¹ A detailed description of the U.S. Coast guard vessel arrival database and the measures undertaken by Nathan Associates to reconcile the data with the ANPR port areas was described in Chapter 2, Existing U.S. East Coast Maritime Activity.

¹² The study uses a speed restriction of 12 knots as the base case. Also when the ANPR proposes a range for the coverage of the seasonal speed restriction, the maximum distance is assumed for the base case and the minimum distance is analyzed in the sensitivity analysis.

ANPR states that the proposed speed restrictions would likely be in the range of 10-14 knots and would be in effect for a distance generally between 20-30 nautical miles from the shoreline. During periods outside of the seasonal speed restrictions, all areas along the Atlantic seaboard within the U.S. Exclusive Economic Zone would be subject to dynamic area management DMA measures if certain concentrations of right whales were sighted.¹³ The ANPR also allows for the establishment of designated routes that provide the greatest possibility of reducing the risk of collisions between vessels and whales. All of the proposed provisions would apply to non-sovereign vessels with a length of 65 feet and above.

Figure 3-2 presents the periods for proposed seasonal speed restrictions by port area. Note that no seasonal speed restrictions are proposed for the Gulf of Maine or the port area of Port Canaveral. These areas would be subject only to dynamic area management. All other port areas are proposed for seasonal speed restrictions as shown in Figure 3-2 and supplemental dynamic area management to be determined during non-seasonal speed restriction periods.

The port areas of Georgetown and Charleston have the most days of proposed seasonal speed restrictions with 212 restricted days each. For these port areas speed restrictions would be in effect from October 1st through April 30th. The port area of Savannah has speed restrictions proposed for 181 days per year with coverage from November 1 through April 30th. The port area of Delaware Bay also has speed restrictions proposed for 181 days per year with coverage during February 1st through April 30th and from October 1st through December 31st.

Most other port areas have speed restrictions proposed for 120-151 days per year. The port area of Boston has the fewest days of proposed seasonal speed restrictions of 45 days per year with coverage from April 1st to May 15th.

¹³ Possible triggers for implementation of DAM measures are discussed later in this chapter.

Figure 3-2. Proposed Seasonal Speed Restrictions by Port Area

ANPR Port Region and Port Area	January	February	March	April	May	June	July	August	September	October	November	December	Restricted days
Northeastern US - Gulf of Maine													-
Eastport, ME													-
Searsport, ME													-
Portland, ME													-
Portsmouth, NH													-
Northeastern US - Off Race Point													
Boston, MA													45
Salem, MA													45
Northeastern US - Cape Cod Bay													120
Mid-Atlantic Block Island Sound													
New Bedford, MA													122
Providence, RI													122
New London, CT													122
New Haven, CT													122
Bridgeport, CT													122
Long Island, NY													122
Mid-Atlantic Ports of New York/New Jersey													150
Mid-Atlantic Delaware Bay													181
Mid-Atlantic Chesapeake Bay													
Baltimore, MD													150
Hampton Roads, VA													150
Mid-Atlantic Morehead City and Beaufort, NC													151
Mid-Atlantic Wilmington, NC													151
Mid-Atlantic Georgetown, SC													212
Mid-Atlantic Charleston, SC													212
Mid-Atlantic Savannah, GA													181
Southeastern US													
Brunswick, GA													120
Fernandina, FL													120
Jacksonville, FL													120
Port Canaveral, FL													-

Source: ANPR.

RESTRICTED PERIOD VESSEL ARRIVALS BY PORT AREA

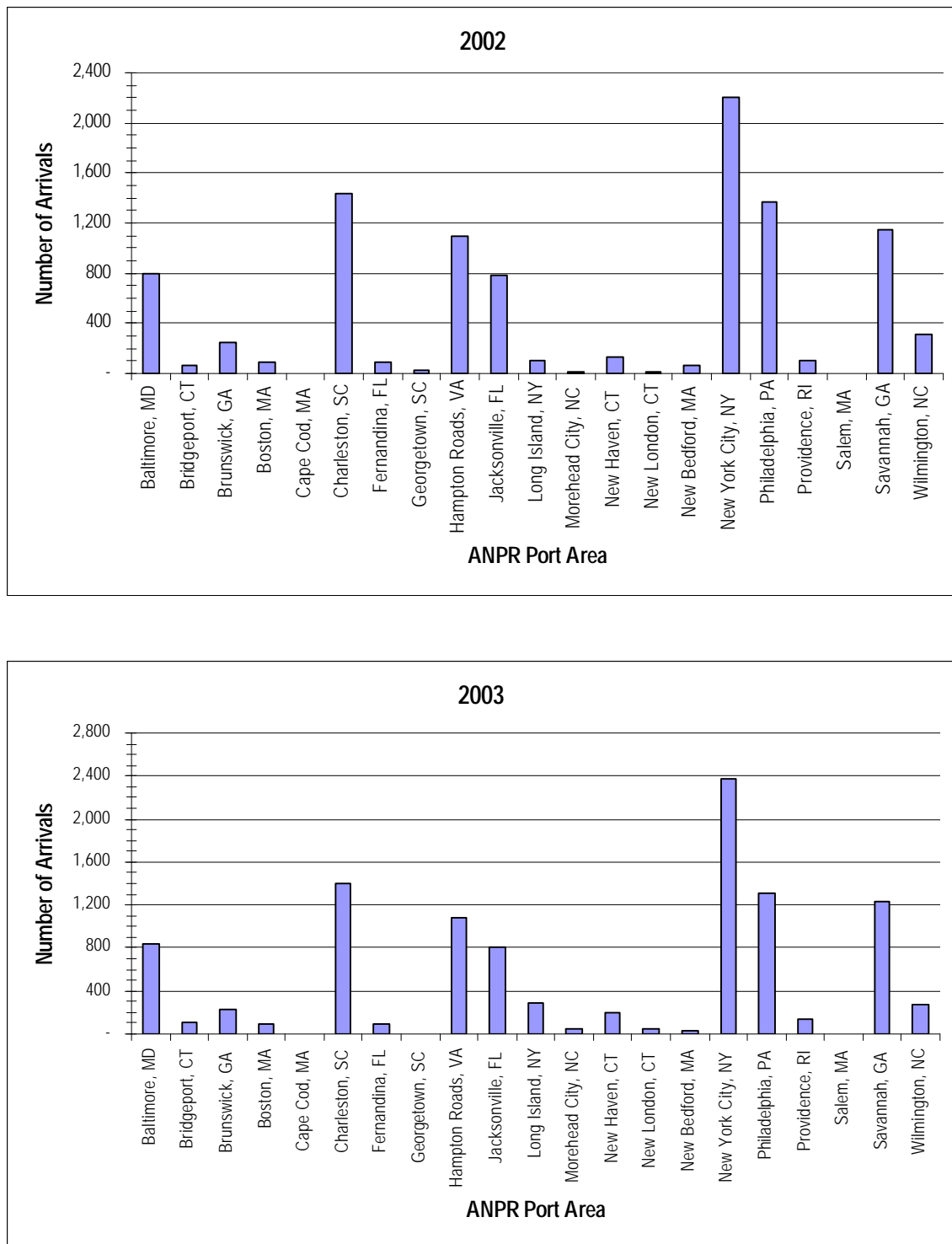
As described in Chapter 2, the U.S. Coast Guard Vessel Arrival database and ancillary data sets provide information on all vessel arrivals of 150 GRT or greater at U.S. ports. Information in the database regarding the date of vessel arrival was used to determine the number of vessel arrivals in 2002 and 2003 that would have occurred during the proposed seasonal speed restriction periods for each port area. Figure 3-3 below displays this data in graphic form. A complete set of data on restricted period vessel arrivals by port area and vessel type is presented in Appendix C.

In 2002, there were 10,088 vessel arrivals at U.S. East Coast ports during the proposed seasonal speed restriction periods. The port area of New York City has the most restricted period vessel arrivals with 2,199 vessel arrivals. The port area of Charleston is next with 1,434 restricted period vessel arrivals, followed closely by the port area of Philadelphia (1,368 vessel arrivals), Savannah (1,151 vessel arrivals) and Hampton Roads (1,093 vessel arrivals).

The port areas of Baltimore (792 vessel arrivals) and Jacksonville (778 vessel arrivals) and constitute next tier of port areas with a substantial number of vessel arrivals during proposed 2002 seasonal speed restriction periods. All other port areas had less than 320 vessel arrivals during the proposed 2002 seasonal speed restriction periods.

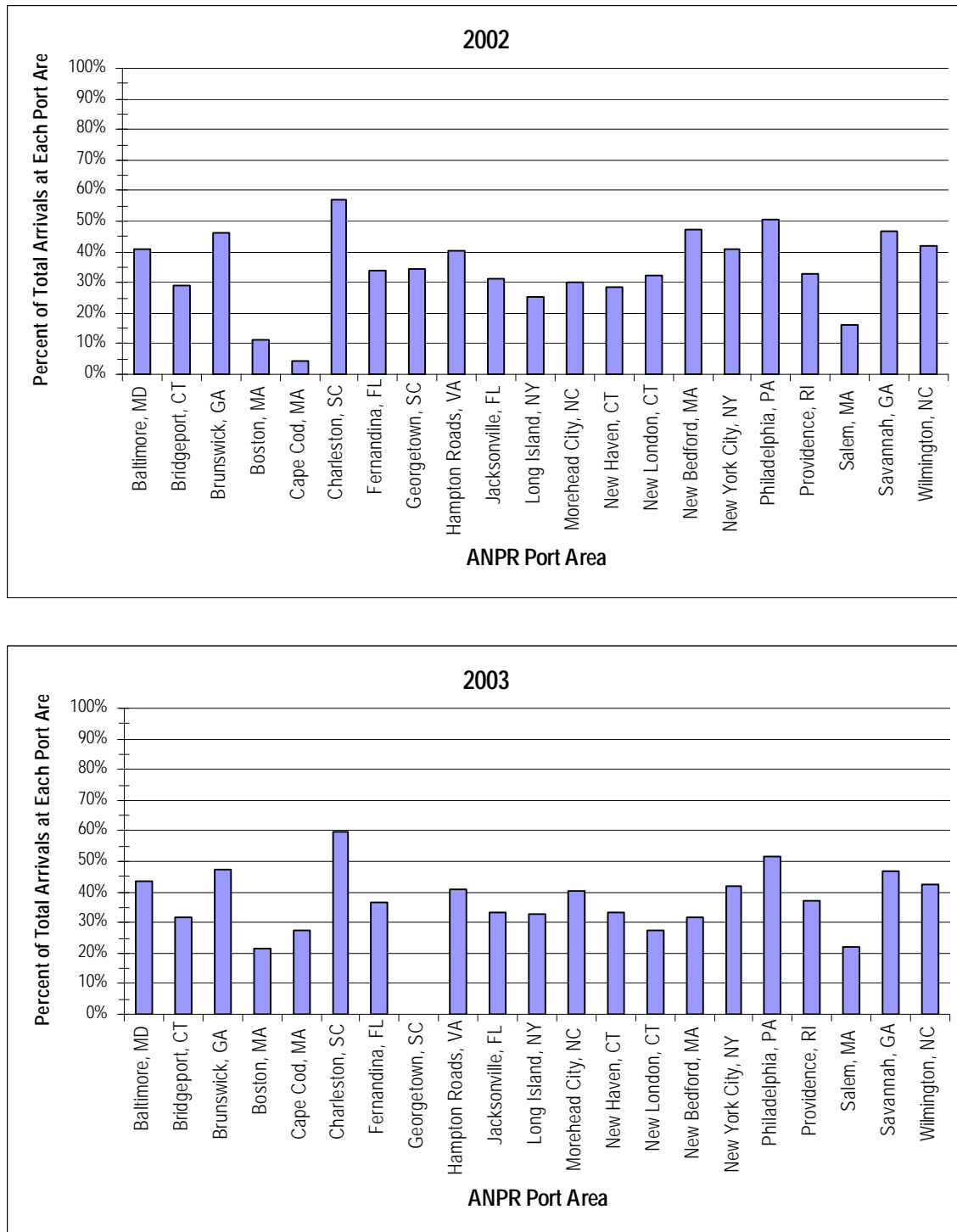
In 2003, U.S. East Coast total vessel arrivals during proposed speed restriction periods increased by 5.0 percent to 10,592 vessel arrivals; however the ranking of ports remained the same as in 2002. Figure 3-4 presents restricted period vessel arrivals as a percentage of total vessel arrivals in each port area for 2002 and 2003. For the entire U.S. East Coast, restricted period vessels arrivals accounted for 38.4 percent of total vessel arrivals in 2002 and 38.5 percent in 2003.

Figure 3-3. Restricted Period Vessel Arrivals by Port Area, 2002 and 2003



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Figure 3-4. Restricted Period Vessel Arrivals as a Percent of Total Vessel Arrivals in Each Port Area, 2002 and 2003



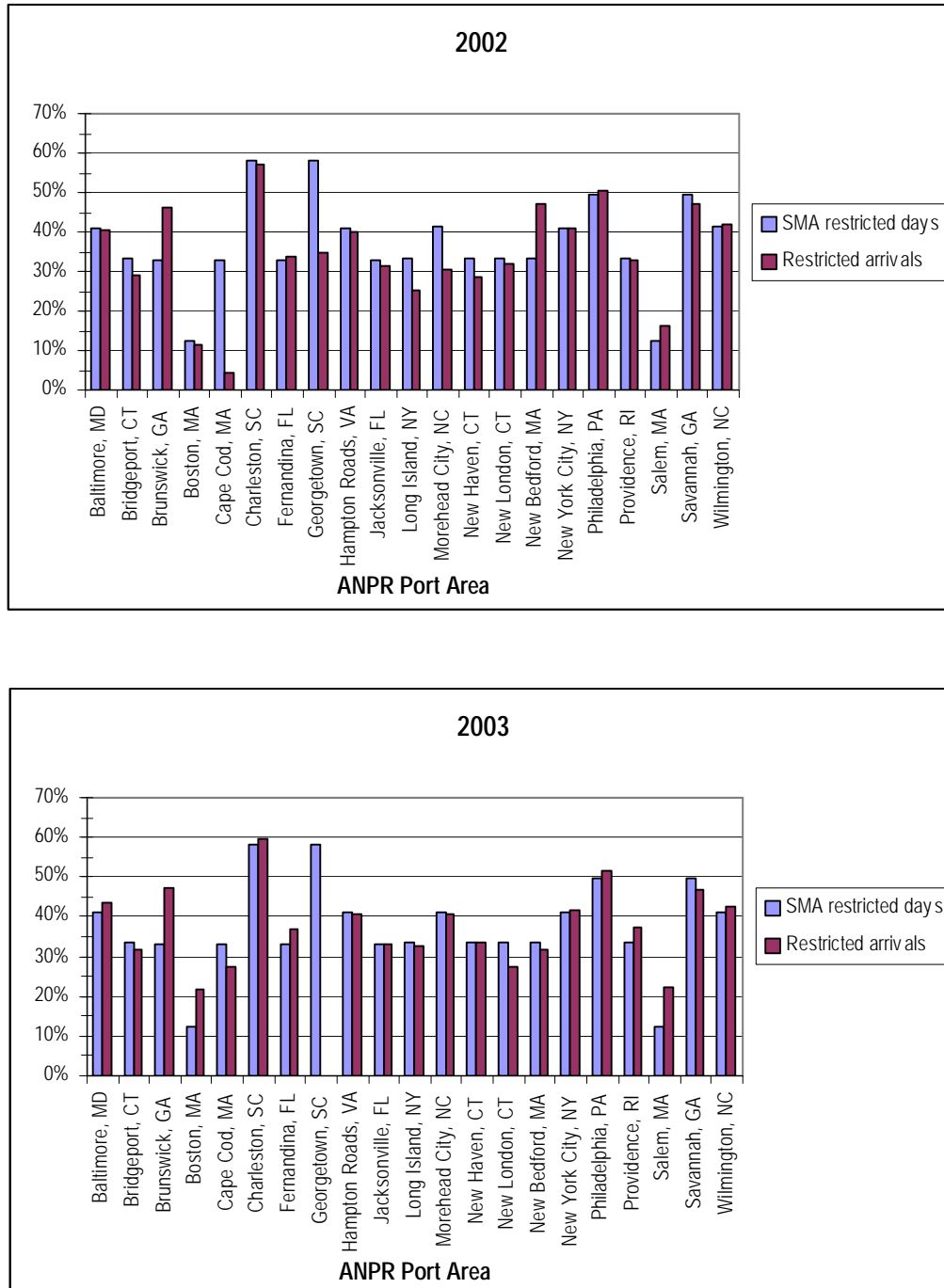
Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

The port area of Charleston has the greatest share of its vessel arrivals during proposed speed restriction periods at 57 percent, followed by the port area of Philadelphia with 50 percent. Seven port areas have between 40-49 percent of their total vessel arrivals during the proposed restricted periods: New Bedford (47 percent), Savannah (47 percent), Brunswick, GA (46 percent), Wilmington, NC (42 percent), Baltimore (41 percent), New York City (41 percent), and Hampton Roads (40 percent).

In Figure 3-5 it is interesting to observe that the share of restricted period arrivals in a port area does not strictly correspond to the share of restricted days in that port area. This reflects the seasonality of vessel traffic at some port areas. Most notable is the port area of Brunswick where seasonal speed restriction days represent 32.9 percent of a calendar year, yet restricted period arrivals accounted for 46.0 percent and 47.4 percent of total arrivals in 2002 and 2003 respectively. Seasonal speed restriction days in the port area of Boston represent 12.3 percent of calendar year, however, in 2003 restricted period arrivals accounted for 21.5 percent of total arrivals. In 2003, the port area of Providence also showed a higher percentage of restricted period arrivals than seasonal speed restriction days (37.3 percent vs. 33.4 percent).¹⁴

¹⁴ The apparent large difference between the percentage of seasonal speed restriction days and percentage of restricted period arrivals shown for the port areas of Cape Cod, Georgetown, Morehead City, New London, New Bedford and Salem can be attributed to the small number of annual vessel arrivals in those port areas.

Figure 3-5. Percent of Seasonal Speed Restriction Days per Year and Percent of Restricted Period Vessel Arrivals by Port Area, 2002 and 2003



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

RESTRICTED PERIOD VESSEL ARRIVALS BY VESSEL TYPE

Figure 3-6 presents restricted period vessels arrivals for the U.S East Coast by type of vessel for 2002 and 2003. By far, containerships are the most frequent vessel type with 3,916 restricted period vessel arrivals in 2002 and 3,997 vessel arrivals in 2003. Tankers represent the second most frequent vessel type with 1,810 restricted period vessels arrivals in 2002 and 2,142 vessel arrivals in 2003. Ro-Ro cargo vessels are the third most frequent vessel type with 1,365 restricted period vessel arrivals in 2002 and 1,371 vessel arrivals in 2003.

Bulk carriers are the fourth vessel type in terms of restricted period vessel arrivals with 1,177 vessel arrivals in 2002 and 1,153 vessel arrivals in 2003. General cargo vessels constitute the fifth vessel type with a substantial number of restricted period vessel arrivals with 929 vessel arrivals and 711 vessel arrivals, respectively for 2002 and 2003. No other vessel type had more than 410 restricted period vessel arrivals in 2002 or 2003.

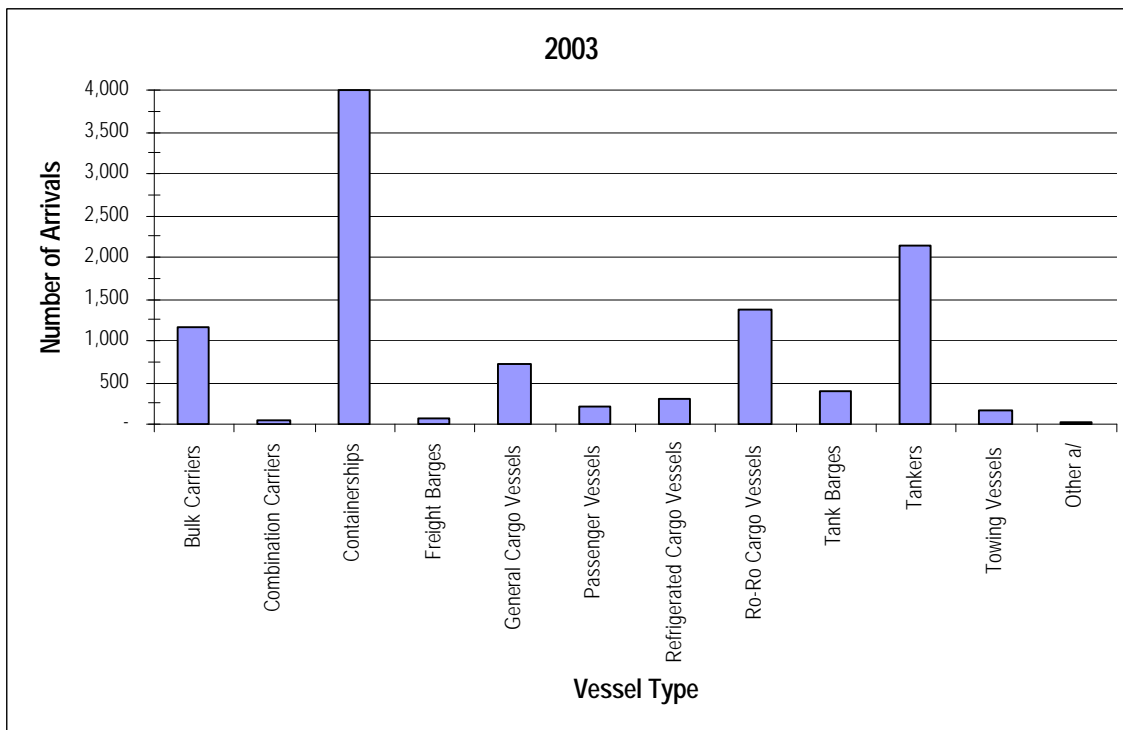
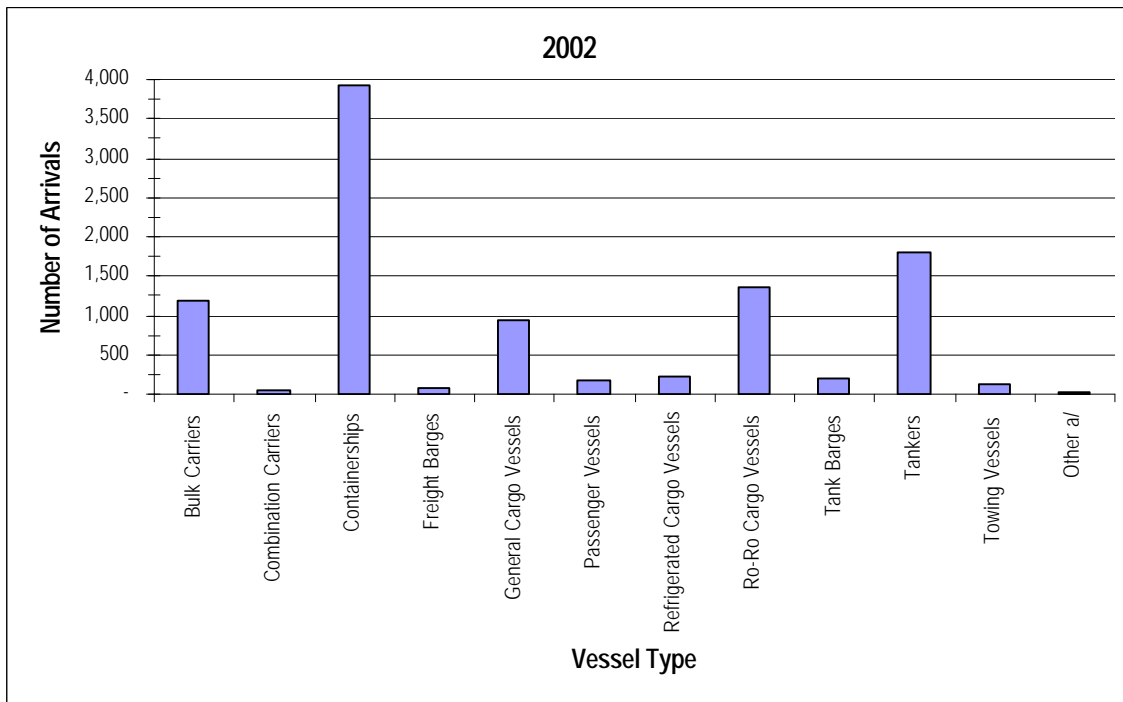
The top five vessel types accounted for 91 percent of total restricted period vessel arrivals in 2002 and 89 percent in 2003.

Within each vessel type, the percentage of U.S. East Coast restricted period vessel arrivals generally falls within the range of 35 to 45 percent (Figure 3-7). In 2002, eight of the twelve vessel types had restricted period vessel arrivals in the 34 to 44 percent range. The exceptions were freight barges, tank barges, and towing vessels that fell within the 25-30 percent range and passenger vessels at 17 percent¹⁵.

The percentage of restricted period vessel arrivals by vessel type was similar in 2003 with the exception of declines in the percentage of restricted period arrivals for combination carriers and “other” vessel types.

¹⁵ The low percentage of restricted period arrivals for passenger vessels is due to the inclusion of the port area of Port Canaveral in total arrivals as dynamic area management is proposed for Port Canaveral. However, no seasonal speed restrictions were specified for the port area of Port Canaveral and hence cruise vessel arrivals in that port area are not included in the restricted period vessel arrivals.

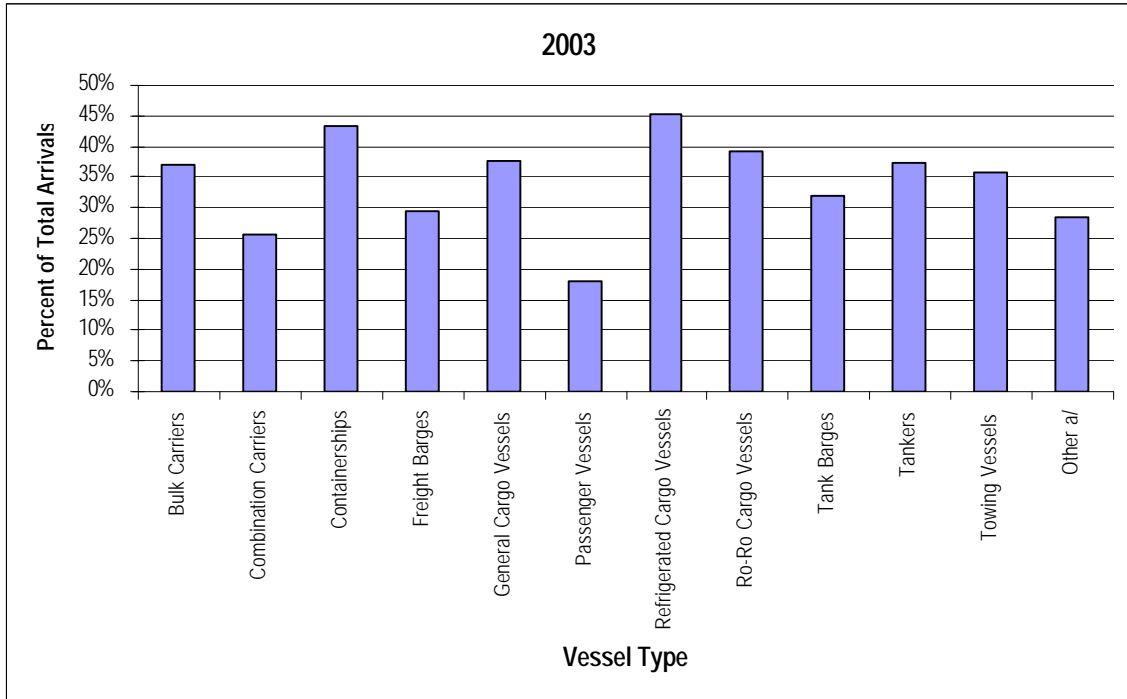
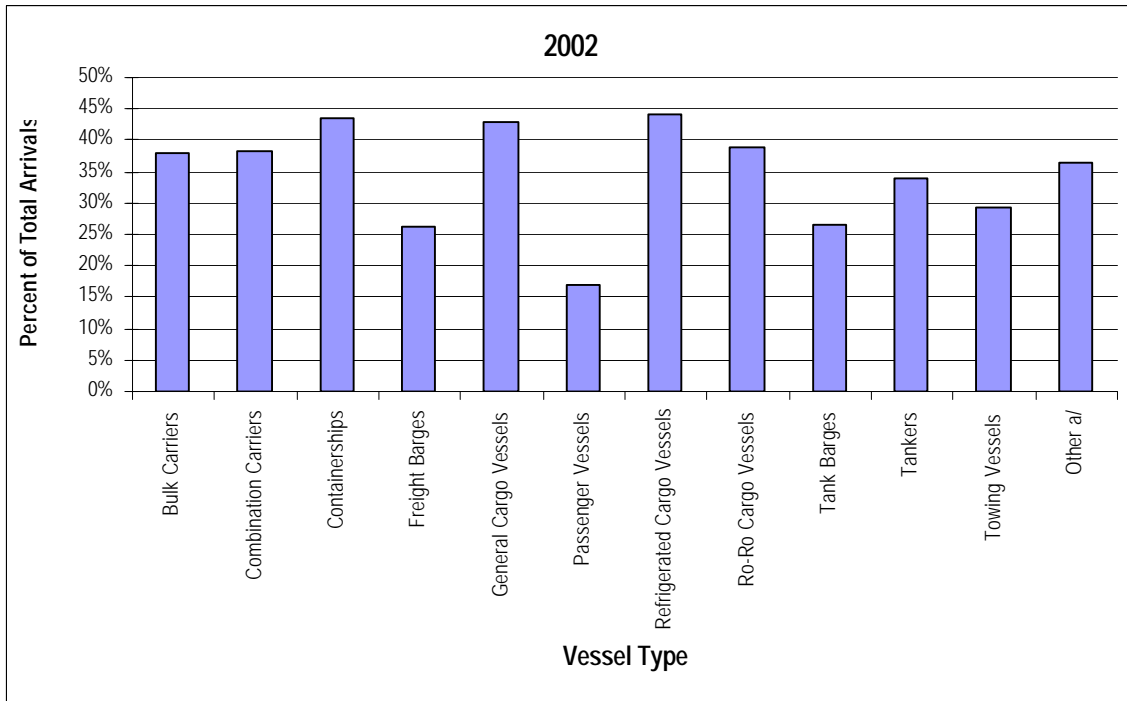
Figure 3-6. Restricted Period Vessel Arrivals by Vessel Type, 2002 and 2003



a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002 and 2003.

Figure 3-7. Restricted Period Vessel Arrivals as a Percent of Total Vessel Arrivals of Each Vessel Type, 2002 and 2003



a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002 and 2003.

AVERAGE DWT OF RESTRICTED PERIOD VESSEL ARRIVALS

The size and type of vessel are key determinants of the economic cost of increased vessel operating time associated with the proposed speed restrictions. We used the U.S. Coast Guard vessel arrival database and ancillary data sets on vessel characteristics to conduct analyses of the distribution of the size and type of vessels calling at the U.S. East Coast ports. In this section we present a series of graphs that depict the size and type of vessels that called at each port area in 2002 and 2003 during the proposed speed restriction periods.

Figure 3-8 presents the average DWT of vessels calling during restricted periods at each of the U.S. East Coast ports in 2002 and 2003. Detailed tables on the average DWT of restricted period vessel arrivals by type of vessel for each port are provided in Appendix D. The average DWT for all U.S. East Coast restricted period vessel arrivals was 35,500 tons in 2002 and 36,300 tons in 2003.

However, as can be seen in Figure 3-8, the average DWT of restricted period vessel arrivals varies considerably by port area. For example in 2002, the port area of Philadelphia had the highest average DWT at nearly 44,000 tons. This was followed by the port area of Hampton Roads with an average of DWT of 42,100 tons, the port area of Charleston at 38,900 tons, and the port area of New York City at 38,600 tons.

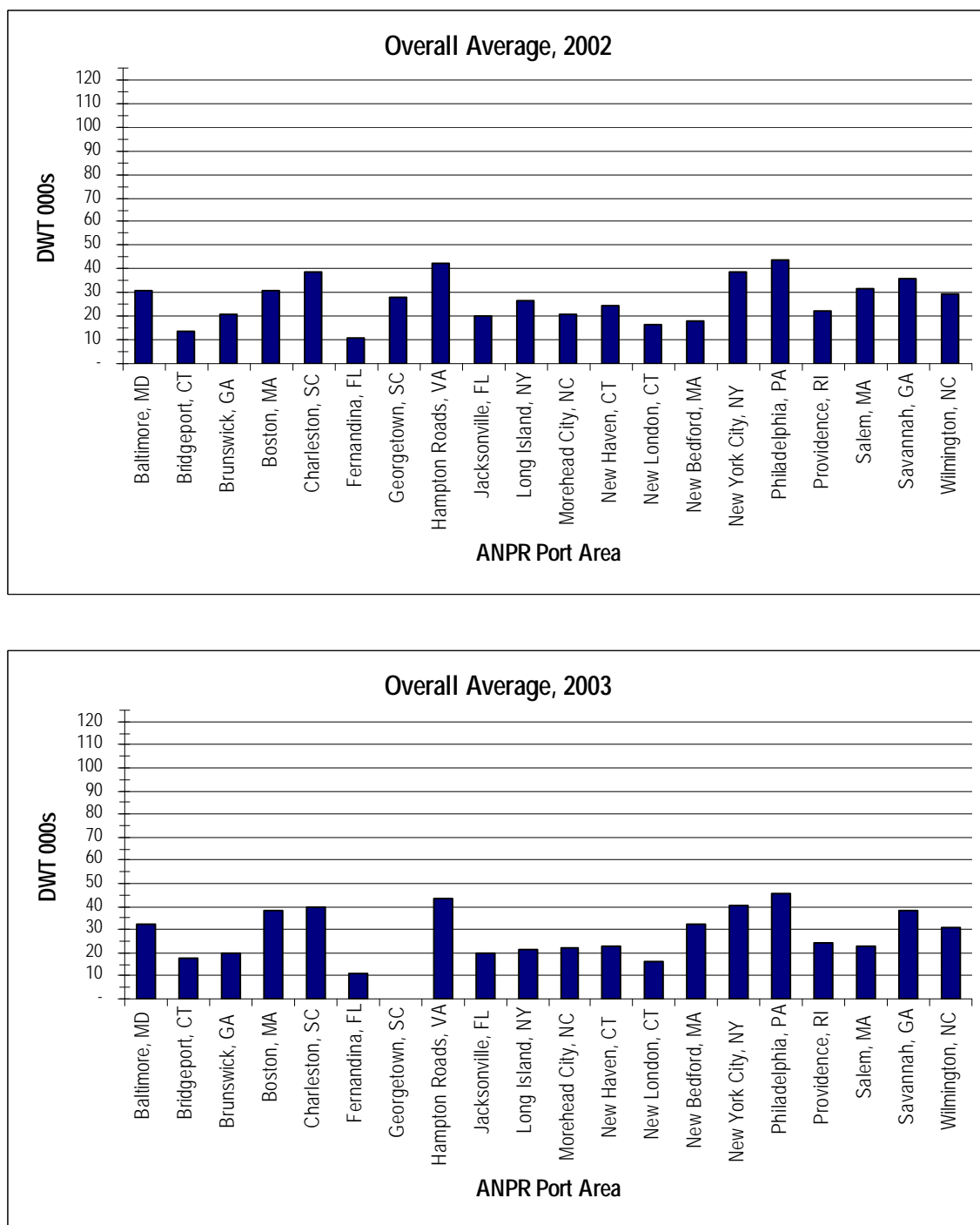
In contrast, the average DWT of restricted period vessel arrivals at the port area of Fernandina was only 10,500 tons in 2002. Other port areas with restricted period vessels with relatively low average DWT in 2002 are Bridgeport (13,700 tons), New London (16,600 tons), and New Bedford (17,900 tons).

In 2003, the port area of Philadelphia continued to have the highest average DWT for restricted period vessel arrivals at 45,600 tons. However, the next five port areas were clustered around an average DWT of 40,000 tons with Hampton Roads at 43,400 tons, New York City at 40,600 tons, Charleston at 39,500 tons, and Savannah and Boston each at 38,100 tons.

The port areas of Fernandina (11,300 tons) and New London (16,100 tons) remained as the port areas with the lowest average DWT for restricted period vessel arrivals in 2003.

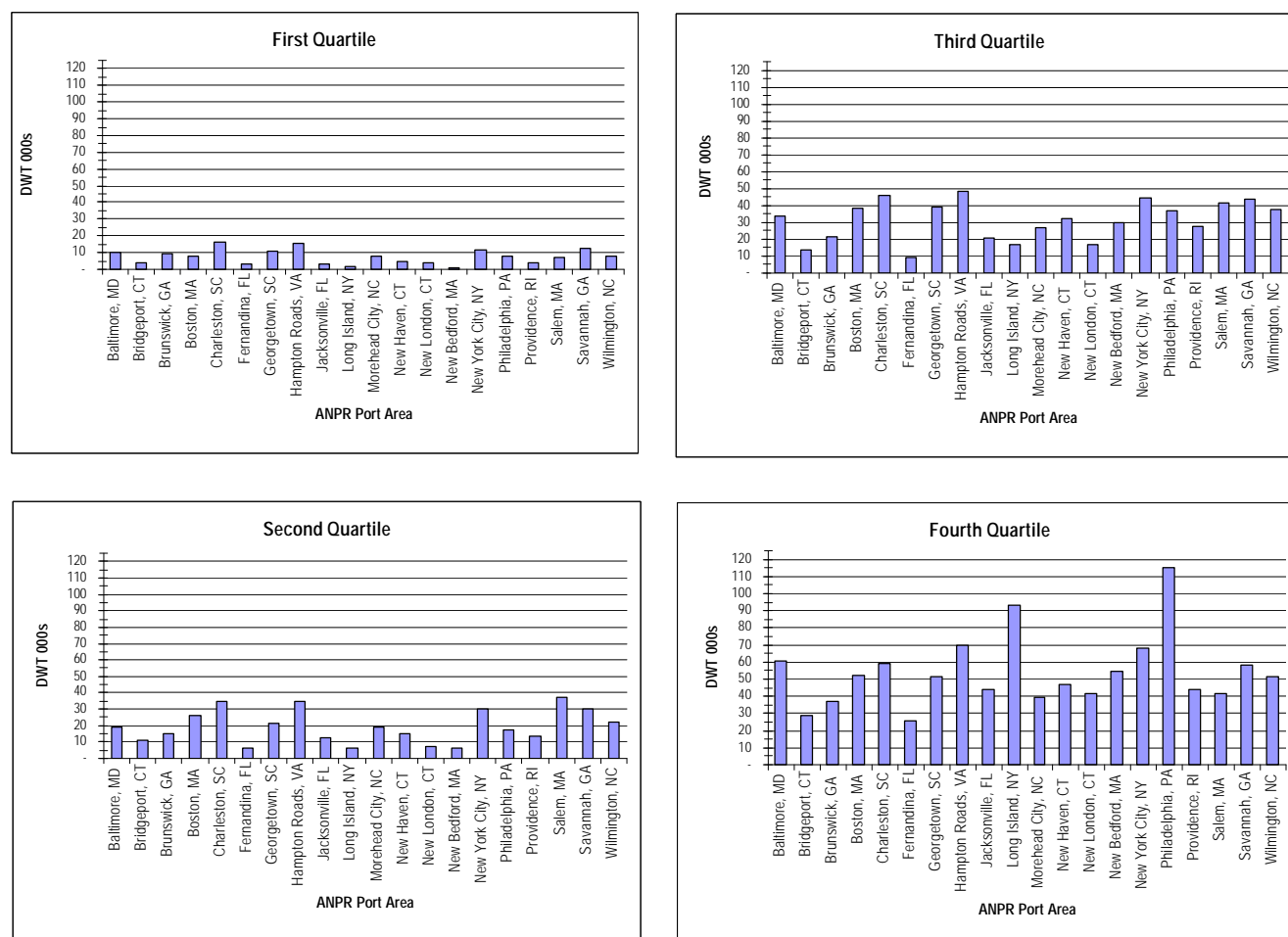
The overall average vessel DWT by port area can sometimes mask a significant size difference of smaller and larger vessels calling at a port. For this reason we present average vessel size by DWT quartile for restricted period vessel arrivals during 2002 for each port in Figure 3-9. The average DWT for the smallest 25 percent of restricted period vessel arrivals at each port are presented in the first quartile. The second smallest 25 percent of restricted period vessel arrivals are presented in the second quartile, etc.

Figure 3-8. Average DWT of Restricted Period Vessel Arrivals by Port Area, 2002 and 2003



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Figure 3-9. Average DWT of Restricted Period Vessel Arrivals by Port Area and Quartile, 2002

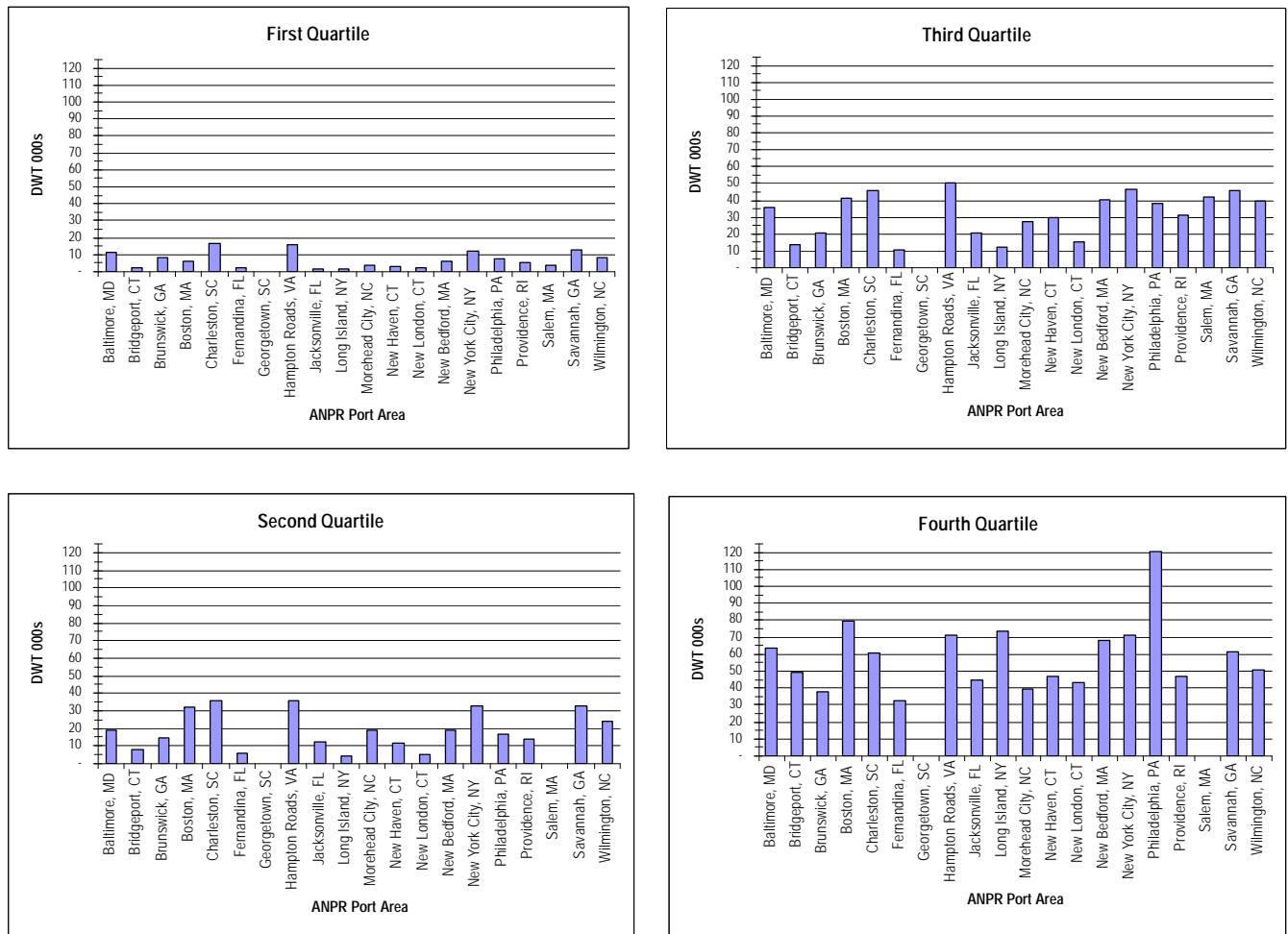


Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

For most port areas, there appears to be an orderly and graduated increase in the average vessel size by DWT quartile. However in the second DWT quartile, the port areas of Hampton Roads, Charleston, Savannah and New York City exhibit large jumps in average DWT of restricted period vessel arrivals. In the third DWT quartile, the increase in average DWT for the port area of Georgetown is notable. Finally in the fourth DWT quartile, the substantial jump in average DWT for the port areas of Philadelphia, Long Island and Baltimore stand out. In each of these port areas, the jump in average DWT is due to the vessel calls of very large tankers. In the port area of Philadelphia for example, the average DWT for tankers in the fourth DWT quartile is 172,200 tons while in Long Island it is 126,300 tons and in Baltimore it is 107,400 tons.

Figure 3-10 presents the same type of data on average vessel DWT of restricted period vessel arrivals by DWT quartile for 2003. The results are similar to those observed for 2002 with the following exceptions. In the third and fourth DWT quartile, the port area of Georgetown did not have any restricted period vessel arrivals; in the third DWT quartile, the port area of New Bedford showed a substantial increase in average DWT; and in the fourth DWT quartile, the port area of Boston exhibited a large jump in average DWT.

Figure 3-10. Average DWT of Restricted Period Vessel Arrivals by Port Area and Quartile, 2003

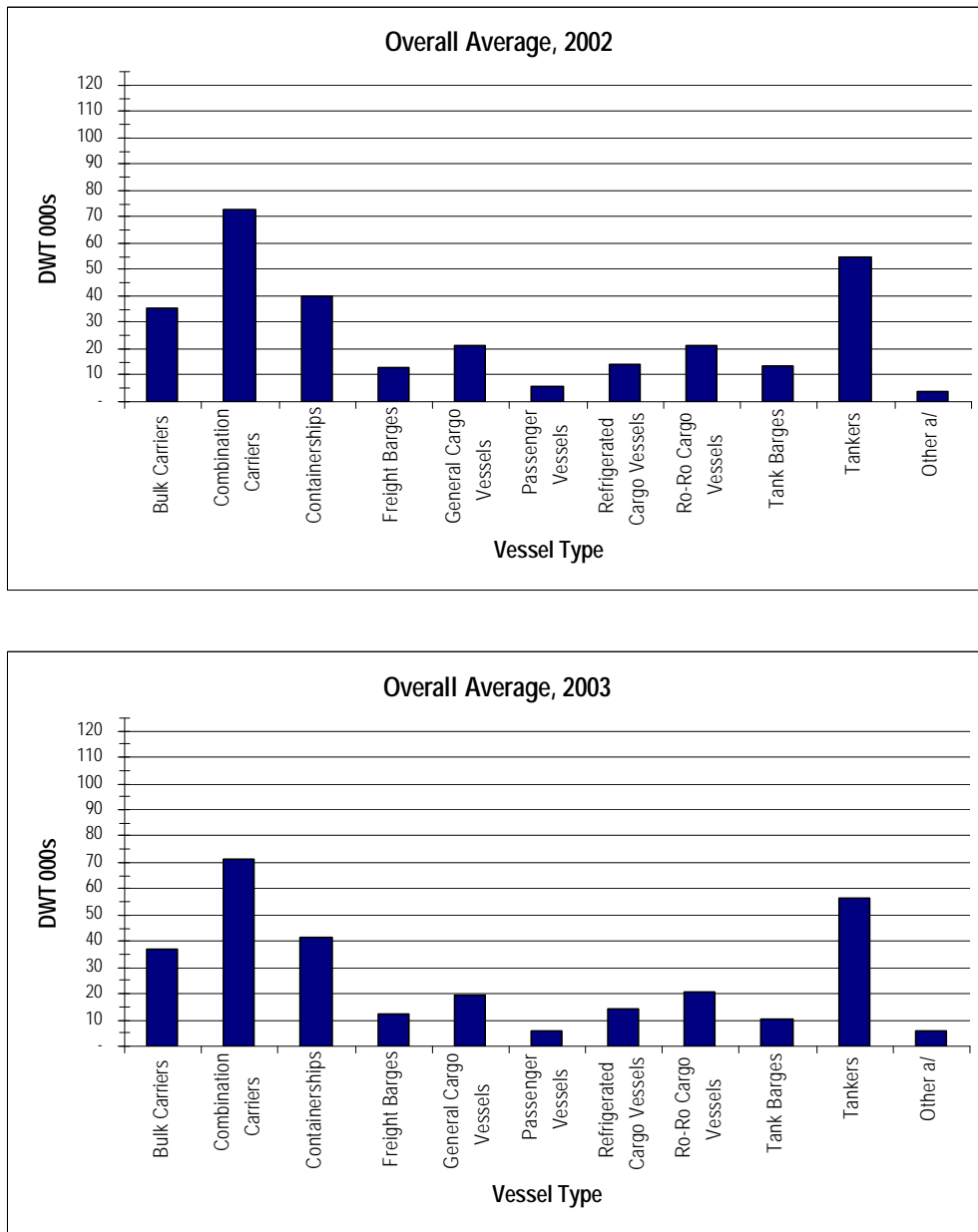


Source:

Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Figure 3-11 presents the average vessel DWT of restricted period vessel arrivals by type of vessel for the U.S. East Coast during 2002 and 2003. Interestingly, combination carriers have the highest average DWT at 73,100 tons in 2002 and 71,100 tons in 2003. Tankers are next with an average DWT of 54,900 tons in 2002 and 56,100 tons in 2003. While tankers include the largest vessels calling at U.S. East Coast ports, there are also smaller chemical and specialty tankers that bring down the average DWT for this vessel type. Containerships rank as the third vessel type in terms of average DWT size with 39,900 tons in 2002 and 41,400 tons in 2003. Bulk carriers are fourth with average DWT of 35,600 tons in 2002 and 37,200 tons in 2003. The average DWT for all other vessel types is 21,000 tons or lower in both 2002 and 2003.

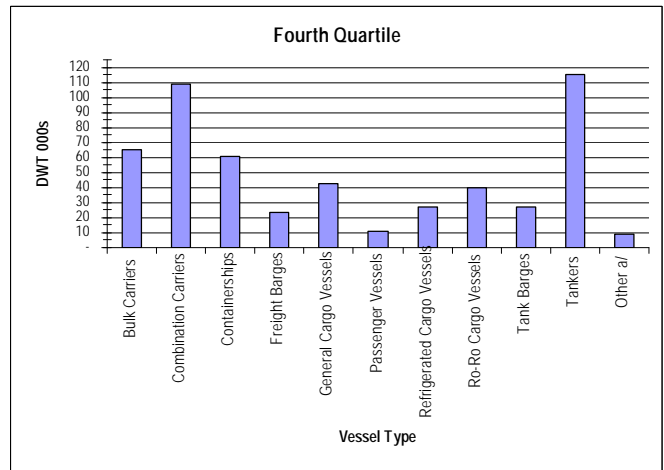
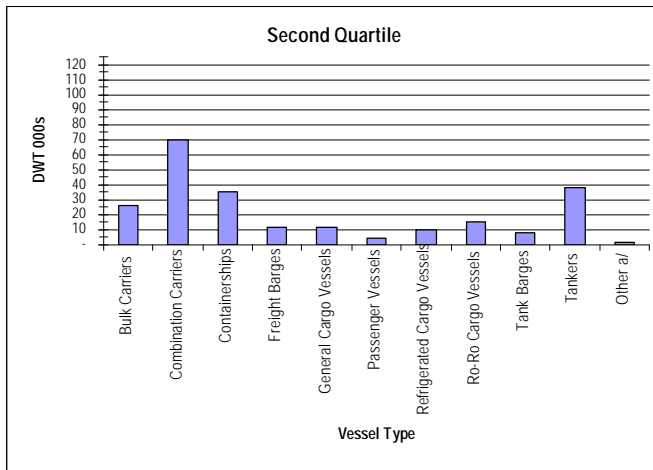
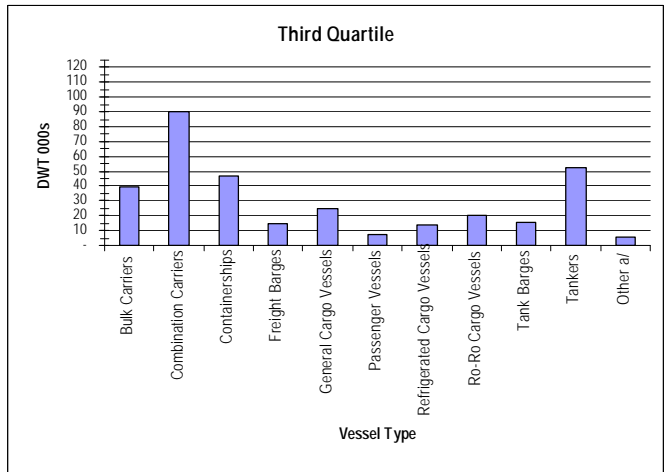
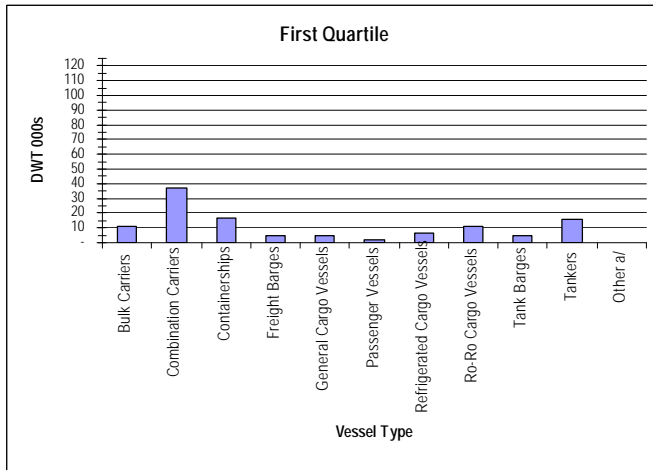
Figure 3-11. Average DWT of Restricted Period Vessel Arrivals by Vessel Type, 2002 and 2003



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

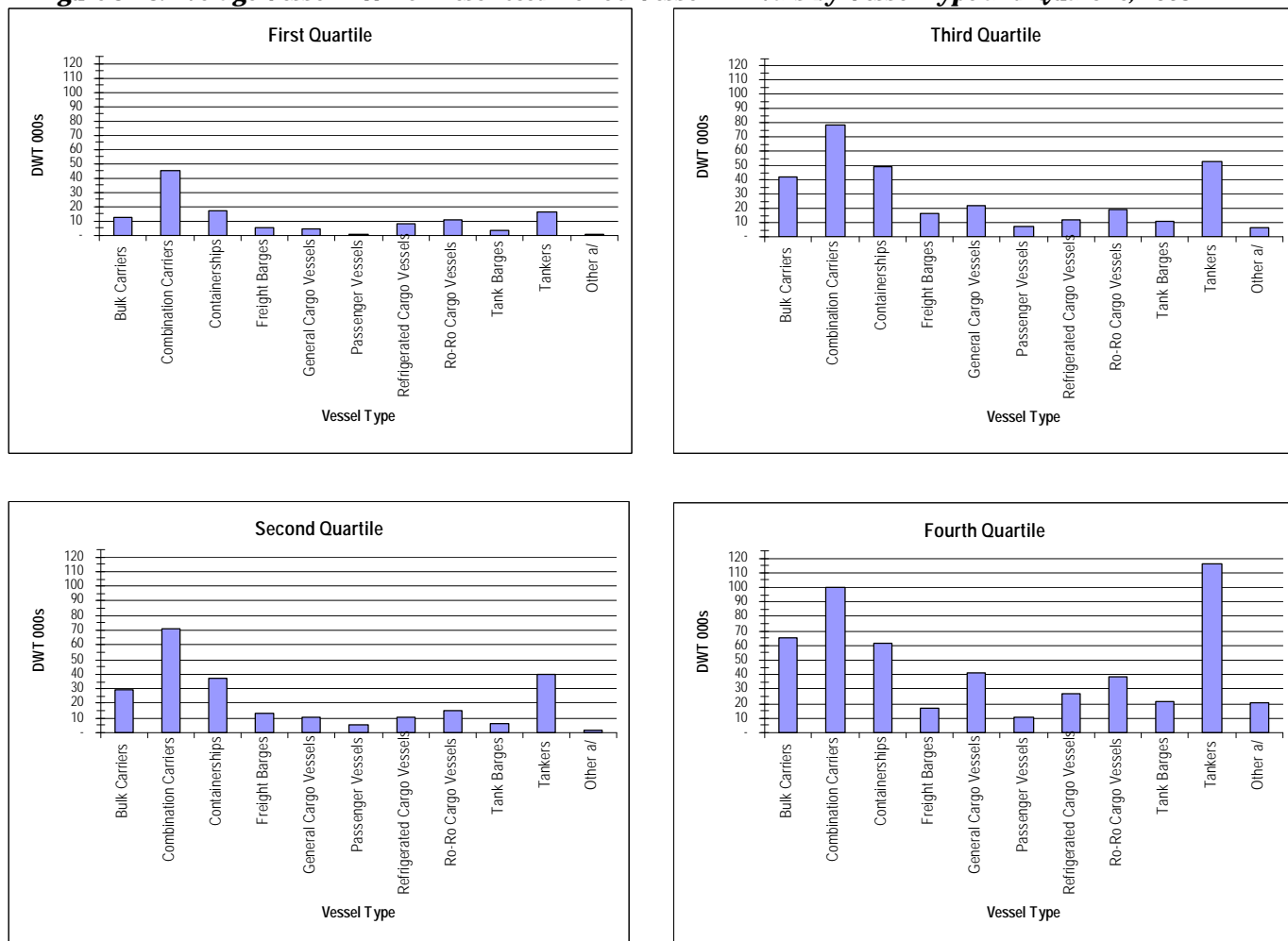
Figure 3-12 and Figure 3-13 presents the average DWT of restricted period U.S. East Coast vessel arrivals by DWT quartile by vessel type for 2002 and 2003, respectively. Even in the first DWT quartile, the average DWT for combination carriers is 37,400 tons in 2002 and 44,900 tons in 2003, more than double the average DWT of any other vessel type. In the second DWT quartile, the average DWT of tankers and combination carriers show substantial increases while in the fourth DWT quartile, the continued increase of average DWT of tankers and the jump in average DWT of bulk carriers are most notable.

Figure 3-12. Average DWT of Restricted Period Vessel Arrivals by Vessel Type and Quartile, 2002



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Figure 3-13. Average Vessel DWT of Restricted Period Vessel Arrivals by Vessel Type and Quartile, 2003



Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Economic Impact Model

We developed an Excel-based spreadsheet model to calculate the potential economic impact of the ANPR ship strike reduction measures. The model uses input worksheets that contain data on

- U.S. East Coast total and restricted period vessel arrivals for 2002 and 2003 by type and size of vessel, port area, and flag of registry
- Vessel service speed by type and size of vessel
- Vessel operating costs at sea by type and size of vessel and flag of registry
- Distance by port over which proposed seasonal management area speed restrictions would be in effect

- Distance and days per year by port area when proposed dynamic area management speed restrictions would be in effect

A set of calculation worksheets are linked to these input worksheets to calculate the delay in minutes that would be encountered by vessels arriving at U.S. East Coast ports during seasonal speed restriction periods and DMA periods. The economic impact is calculated by multiplying the minutes of delay by vessel operating costs at sea. A set of output worksheets are used to report economic impact by various combinations of the following items:

- Year
- Port area
- Vessel type
- Vessel DWT size range
- U.S. or foreign flag of registry
- Seasonal speed restrictions
- DMA speed restrictions
- Alternative restricted speeds
- Alternative effective distance of speed restrictions by port area

In the sections below, we present the source and values for key input data used in the economic impact model.

OPERATING SPEED

Accurate information on current vessel operating speeds is clearly an important element for the determination of the economic impact of the proposed speed restrictions. We have reviewed information on vessel operating speeds by type and size of vessel from three sources:

- Mandatory Ship Reporting System that provides actual operating speeds reported by ships captains
- U.S. Army Corps of Engineers estimates of vessel service speeds reported in guidance memorandum for use in official planning and economic studies
- Maritime industry comments presented during stakeholder meetings conducted in the fall of 2004.

The Mandatory Ship Reporting System (MSRS) was proposed by the U.S. and approved by the International Maritime Organization (IMO) in 1999. The MSRS requires all commercial ships 300 gross tons or greater to report information regarding entry location and time, route, destination and speed when entering either of two areas surrounding critical right whale habitats. The Northeast System encompasses right whale critical habitats in Cape Cod bay and the Great South Channel. The Southeast System encompasses right whale critical habitat off the Coastline of Georgia and Florida.

Nathan Associates analyzed the MSRS information reported for 2002 and 2003. During this 2-Year period, there were 5,337 MSRS records reported by 1,136 vessels. Using the reported vessel call sign, vessels in the MSRS database were matched with the U.S. Coast Guard vessel characteristics database to identify type and size of vessel. After making corrections for obvious MSRS data entry errors, we were able to match call signs reported for 1,066 vessels (94 percent) that accounted for 5,189 MSRS records (97 percent). Of these, there were 4,374 MSRS records (84 percent) that contained usable information regarding vessel operating speed.

Table 3-1 presents the MSRS average operating speed by type and size of vessel for 2002 and 2003. The fastest average reported operating speeds were reported for containerships ranging from 14.6 knots for vessels less than 10,000 DWT to 20.3 knots for vessels between 50-70,000 DWT. Average reported operating speeds for bulk carriers range from 11.6 knots for vessels less than 10,000 DWT to 14.2 knots for vessels between 70-100,000 DWT.

Table 3-1. MSRS Average Reported Speed by Vessel Type and DWT Size Range, 2002 and 2003 (knots)

Vessel Type	DWT (000s)							
	0-10	10-20	20-30	30-40	40-50	50-70	70-100	100+
Bulk Carriers	11.6	12.2	12.5	13.0	13.4	14.0	14.2	
Combination Carriers				10.0		14.8	13.4	
Containerships	14.6	18.0	17.6	18.3	18.8	20.3		
Freight Barges	14.2							
General Cargo Vessels	13.2	15.7	15.2	13.8	15.4			
Passenger Vessels	16.1	16.0						
Refrigerated Cargo Vessels	15.1	20.6						
Ro-Ro Cargo Vessels	13.5	17.1	17.6	20.0	18.3	14.3		
Tank Barges					15.3			
Tankers	11.9	13.4	12.9	13.8	13.7	13.9	14.2	15.4
Towing Vessels	10.0							
Other a/	11.4							

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of MSRS data for 2002 and 2003.

A second source of vessel operating speed by vessel type and size is guidance memorandum published by the U.S. Army Corps of Engineers (USACE) to be used by planners in studies to determine the potential benefits of harbor improvement projects. Vessel service speeds are provided for four vessel types –containerships, general cargo ships, bulk carriers and tankers and for a range of vessel sizes relevant for U.S. maritime commerce.

Table 3-2 presents USACE estimates of vessel service speed for each of the four vessel types. For ease of comparison, we have included vessel DWT size ranges from the USACE similar to those used in the MSRS analysis above. In general, the estimated service speeds correspond closely to those reported in the MSRS. For example, MSRS reports average operating speeds of 14.6 knots and 18.0 knots for the first two DWT size ranges of containerships. The USACE estimates are 14.7 knots and 17.9 knots for these same size containerships. However, starting with containerships of 20,000 DWT and greater, the MSRS reports average operating speeds of 2-3 knots slower than the USACE estimates.

Table 3-2. U.S. Army Corps of Engineers, Estimated Service Speed by Type and Size of Vessel, FY 2005 (knots)

Vessel type	DWT							
	5000	15000	25000	35000	45000	60000	85000	115000
Container	14.7	17.9	19.7	20.9	21.9	23.1	-	-
General cargo	13.4	15.8	17.0	17.9	18.6			
Bulk carrier	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Tankers	13.5	14.0	14.2	14.3	14.4	14.6	14.7	14.9

Source: U.S. Army Corps of Engineers, FY 2005 Deep Draft Vessel Operating Costs.

A similar pattern is observed for general cargo vessels where the MSRS data and USACE estimates match well for the smaller two DWT size categories, but where the MSRS average reported speeds are 2-3 knots slower than the USACE estimates for the larger vessel DWT size categories.

For bulk carriers, the MSRS reported average operating speed for bulk carriers greater than 50,000 DWT corresponds closely with the USACE estimate. However, the MSRS reported speed for bulk carriers less than 50,000 DWT are approximately 1-2 knots slower than the USACE estimates.

For tankers, the difference between the MSRS reported average speed and the USACE estimated service speed is usually less than 1 knot, except for the smallest tanker DWT size category where the MSRS speed is 1.6 knots below the USACE estimate.

There are several possible explanations for the apparent tendency for the MSRS reported speeds to be below the USACE estimated service speeds. It may be that vessels entering the MSRS reporting may voluntarily slow somewhat from normal operating speeds. Second, there may be a tendency to slightly underreport actual vessel operating speeds in order to appear to be complying. Third, the navigation characteristics of the two MSRS reporting areas may differ from conditions in open seas where vessel operating speeds are higher.

Limited information on vessel operating speeds was also provided by maritime industry comments provided during public stakeholder meetings conducted in the fall of 2004. In general, the anecdotal information was consistent with the general depiction of speeds by vessel type presented above.

Using primarily the USACE data, we have developed estimates of vessel operating speeds for the vessel type and DWT size categories corresponding to those used to report U.S. East Coast vessel arrivals. These estimates of average operating speeds are presented in Table 3-3.

Table 3-3. Average Vessel Operating Speeds by Vessel Type Used in Economic Impact Analysis (knots)

Year and period	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Bulk Carriers	11.6	11.6	12.2	12.2	12.5	12.5	13.0	13.0	13.4	13.4	14.0	14.0	14.1	14.1	14.1	14.1	14.1	14.1
Combination Carriers	11.6	11.6	12.2	12.2	12.5	12.5	13.0	13.0	13.4	13.4	14.0	14.0	14.1	14.1	14.1	14.1	-	-
Containerships	13.0	15.8	17.4	18.5	19.3	20.0	20.7	21.2	21.7	22.1	22.7	23.4	24.1	24.6	-	-	-	-
Freight Barges	12.0	14.2	15.3	16.1	16.8	17.3	17.7	18.1	18.4	18.8	19.2	-	-	-	-	-	-	-
General Cargo Vessels	12.0	14.2	15.3	16.1	16.8	17.3	17.7	18.1	18.4	18.8	-	-	-	-	-	-	-	-
Passenger Vessels	16.0	18.0	20.0	22.0	24.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	13.0	15.8	17.4	18.5	19.3	20.0	20.7	21.2	21.7	22.1	22.7	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	13.0	15.8	17.4	18.5	19.3	20.0	20.7	21.2	21.7	22.1	22.7	23.4	24.1	-	-	-	-	-
Tank Barges	13.2	13.7	13.9	14.0	14.2	14.2	14.3	14.4	14.4	14.5	14.5	-	-	-	-	-	-	-
Tankers	13.2	13.7	13.9	14.0	14.2	14.2	14.3	14.4	14.4	14.5	14.5	14.6	14.7	14.7	14.8	14.8	14.9	15.0
Towing Vessels	13.2	13.7	13.9	14.0	14.2	14.2	14.3	14.4	14.4	14.5	-	-	-	-	-	-	-	-
Other <i>a/</i>	12.0	12.0	12.0	12.0	12.0	12.0	12.0	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates Inc. as described in text.

VESSEL OPERATING COSTS AT SEA

The USACE also prepares estimates of vessel operating costs to be used by planners in studies to determine the potential benefits of harbor improvement projects. Vessel operating costs include annual capital costs as determined by the replacement cost of the vessels and application of capital recovery factors; estimates of fixed annual operating costs such as for crew, lubes and stores, maintenance and repair, insurance and administration; the number of operational days per year; and fuel costs at sea and in port.

The type and DWT size of vessels for which operating costs are reported by the USACE is shown in Table 3-4 below. Vessel operating costs are presented separately for U.S. flag and foreign flag vessels, for five vessel types, and up to 14 vessel DWT sizes within a vessel type.

Table 3-4. Type and Size of Vessels for which USACE Reports Vessel Operating Costs

Foreign flag					U.S. flag				
General cargo vessel	Container ship	Bulk carrier	Tanker (double hull)	Tanker (single hull)	General cargo vessel	Container ship	Bulk carrier	Tanker (double hull)	Tanker (single hull)
11,000	9,000	15,000	20,000	20,000	11,000	9,000	15,000	20,000	20,000
14,000	14,000	25,000	25,000	25,000	14,000	14,000	25,000	25,000	25,000
16,000	17,000	35,000	35,000	35,000	16,000	17,000	35,000	35,000	35,000
20,000	20,000	40,000	50,000	50,000	20,000	20,000	40,000	50,000	50,000
24,000	23,000	50,000	60,000	60,000	24,000	23,000	50,000	60,000	60,000
30,000	28,000	60,000	70,000	70,000	30,000	28,000	60,000	70,000	70,000
	31,000	80,000	80,000	80,000		31,000	80,000	80,000	80,000
	35,000	100,000	90,000	90,000		35,000	100,000	90,000	90,000
	39,000	120,000	120,000	120,000		39,000	120,000	120,000	120,000
	42,000	150,000	150,000	150,000		42,000	130,000	150,000	150,000
	49,000	175,000	175,000	175,000		49,000		175,000	175,000
	55,000	200,000	200,000	200,000		55,000		200,000	200,000
	66,000		265,000	265,000		66,000		265,000	265,000
	82,000		325,000	325,000					

Source: U.S. Army Corps of Engineers, Economic Guidance Memorandum 02-06, Deep Draft Vessel Operating Costs

We applied regression techniques to the USACE vessel operating cost data in order to match exactly with the vessel size categories used in our analysis of U.S. East Coast vessel arrivals. The resulting estimates of vessel operating costs by type and size of vessel for 2002 are presented in Table 3-5¹⁶. As the U.S. Coast Guard vessel arrival database did not provide adequate information to distinguish single-hull and double-hull tankers, we used the vessel operating costs for double hull tankers in our analysis.¹⁷

¹⁶ Up through 2002, the U.S. Army Corps of Engineers published every several years updated information on vessel operating costs at sea for U.S. and foreign flag vessels. However, starting with the Economic Guidance Memorandum 05-01, deep draft vessel operating costs will not be posted for public access as some or much of the information used to develop the cost estimates is considered proprietary by commercial sources and protected from open or public disclosure under Section 4 of the Federal Freedom of Information Act, as amended. For purposes of this study, we have obtained limited access to the deep draft vessel operating costs for 2004. In general, vessel operating costs for 2004 are 2-5 percent lower than those reported for 2002 due primarily to revised assumptions regarding annual capital costs. However, as the USCG data on vessel arrivals is for 2002 and 2003 we have used the published deep draft vessel operating costs for 2002 in this analysis.

¹⁷ Generally the additional vessel operating costs per hour for double hull tankers increases from one percent greater for the smaller tankers to seven percent greater for the largest tankers.

Table 3-5. Hourly Vessel Operating Costs at Sea for Foreign Flag and U.S. Flag, Vessel Type and DWT Size Range, 2002

Vessel type and flag	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Foreign Flag Hourly Operating Costs at Sea																		
Bulk Carrier	531	544	557	570	583	597	611	626	640	656	679	712	746	781	819	878	987	1,136
Combination Carrier (e.g. OBO)	558	571	584	598	612	627	642	657	673	688	713	747	783	820	860	922	1,036	1,192
Container Ship	551	612	679	753	836	927	1,029	1,141	1,267	1,405	1,643	2,023	2,490	3,066	3,776	5,158	-	-
Freight Barge	342	417	509	620	755	921	1,122	1,368	1,667	2,031	-	-	-	-	-	-	-	-
General Dry Cargo Ship	342	417	509	620	755	921	1,122	1,368	1,667	2,031	-	-	-	-	-	-	-	-
Passenger Ship a/	2,446	3,342	4,566	6,571	8,091	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	1,240	1,376	1,527	1,694	1,880	2,086	2,315	2,568	2,850	3,162	3,696	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	606	673	746	828	919	1,020	1,132	1,256	1,393	1,546	1,807	2,225	2,739	-	-	-	-	-
Tank Barge	707	720	733	747	760	774	789	803	818	833	856	-	-	-	-	-	-	-
Tank Ship	707	720	733	747	760	774	789	803	818	833	856	888	921	955	990	1,046	1,146	1,278
Towing Vessel	707	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other b/	342	417	509	620	755	921	1,122	-	-	-	-	-	-	-	-	-	-	-
US Flag Hourly Operating Costs at Sea																		
Bulk Carrier	1,100	1,131	1,164	1,197	1,231	1,267	1,303	1,340	1,379	1,418	1,480	1,566	1,657	1,753	1,855	2,019	2,326	2,756
Combination Carrier (e.g. OBO)	1,155	1,188	1,222	1,257	1,293	1,330	1,368	1,407	1,448	1,489	1,554	1,644	1,740	1,841	1,948	2,120	2,442	2,894
Container Ship	877	963	1,058	1,163	1,278	1,404	1,542	1,695	1,862	2,046	2,357	2,845	3,435	4,147	5,007	6,642	-	-
Freight Barge	810	958	1,133	1,340	1,585	1,875	2,218	2,624	3,104	3,672	4,724	-	-	-	-	-	-	-
General Dry Cargo Ship	810	958	1,133	1,340	1,585	1,875	2,218	2,624	3,104	3,672	4,724	-	-	-	-	-	-	-
Passenger Ship a/	3,853	5,111	6,779	9,427	11,381	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	1,972	2,167	2,381	2,616	2,875	3,159	3,471	3,813	4,190	4,604	5,303	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	964	1,059	1,164	1,279	1,405	1,544	1,697	1,864	2,048	2,251	2,592	3,130	3,779	-	-	-	-	-
Tank Barge	1,566	1,596	1,626	1,656	1,688	1,720	1,752	1,785	1,819	1,854	1,906	-	-	-	-	-	-	-
Tank Ship	1,566	1,596	1,626	1,656	1,688	1,720	1,752	1,785	1,819	1,854	1,906	1,979	2,055	2,133	2,215	2,343	2,573	2,879
Towing Vessel	1,566	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other b/	810	958	1,133	1,340	1,585	1,875	2,218	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. as described in text from data provided in U.S. Army Corps of Engineers, Economic Guidance Memorandum 02-06, Deep Draft Vessel Operating Costs.

We also used the USACE reported vessel operating costs to develop estimates of vessel operating costs for other vessel types making necessary adjustments for vessel capital cost and operating characteristics and flag of registry. For example, operating costs for U.S. flag Ro-Ro vessels were related to U.S. flag containerships and foreign flag combination carriers were related to foreign flag bulk carriers

Operating costs for US flag bulk carriers, combination carriers and tankers are double those of similar foreign flag vessels. Operating costs for U.S flag containerships, Ro-Ro vessels and passenger vessels are about 1.5 times higher than comparable foreign flag vessels.

EFFECTIVE DISTANCE OF SPEED RESTRICTION

Along the U.S. East Coast, the presence of northern right whales is generally acknowledged to occur within 30 nautical miles of the coast and in waters less than 25 fathoms. Based on this research, the ANPR specifies 20-30 nautical miles from shore as the possible distances for implementation of proposed seasonal speed restrictions.

Table 3-6 presents the minimum and maximum distance from shore that proposed seasonal speed restrictions might be implemented for each port area. For some port areas, the ANPR did not propose a range and the minimum and maximum distances are the same.

It has been pointed out by independent researchers and stakeholders that due to vessel operating practices, the effective distance of the proposed seasonal speed restrictions may be less than distances specified in the ANPR. This is because at most port areas, vessels already slow down to 8-10 knots at the pilot buoy for the pilot to board the vessel. Due to the proximity of the pilot buoys to the shore, it is impractical for the vessel to resume normal operating speed. Thus the effective distance over which the proposed seasonal speed restrictions would apply is lessened by the distance of the pilot buoy from the shore.

The location of the pilot buoy relative to the harbor baseline or closing line is shown in Table 3-6 along with normal vessel operating speed at the pilot buoy. As a result of this factor, the effective distance of proposed seasonal speed restrictions range from a possible minimum of 7.5 nautical miles for the port area of Charleston to 45 miles for Cape Cod Bay¹⁸.

¹⁸ The ANPR did not explicitly specify a possible distance for the seasonal speed restriction; this estimate is based on approximate distance required to traverse the Cape Cod Bay management area to the port area of Sandwich.

Table 3-6. Effective Distance of Proposed Seasonal Speed Restrictions

ANPR Port Region and Port Area	ANPR Possible distances from shore for SMA speed restrictions		Pilot buoy		Effective distance of proposed SMA speed restriction	
	Min	Max	Vessel speed at buoy	Location relative to harbor baseline or closing line	Min	Max
Northeastern US - Gulf of Maine						
Eastport, ME	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Searsport, ME	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portland, ME	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portsmouth, NH	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Northeastern US - Off Race Point						
Boston, MA	25.0	25.0	n.a.	n.a.	25.0	25.0
Salem, MA	25.0	25.0	n.a.	n.a.	25.0	25.0
Northeastern US - Cape Cod Bay						
	30.0	50.0	10	5.0	25.0	45.0
Mid-Atlantic Block Island Sound						
New Bedford, MA	20.0	30.0	n.a.	n.a.	20.0	30.0
Providence, RI	20.0	30.0	n.a.	n.a.	20.0	30.0
New London, CT	20.0	30.0	n.a.	n.a.	20.0	30.0
New Haven, CT	20.0	30.0	n.a.	n.a.	20.0	30.0
Bridgeport, CT	20.0	30.0	n.a.	n.a.	20.0	30.0
Long Island, NY	20.0	30.0	n.a.	n.a.	20.0	30.0
Mid-Atlantic Ports of New York/New Jersey						
	30.0	30.0	10	6.8	23.2	23.2
Mid-Atlantic Delaware Bay						
	20.0	30.0	5	2.5	17.5	27.5
Mid-Atlantic Chesapeake Bay						
Baltimore, MD	30.0	30.0	10	2.9	27.2	27.2
Hampton Roads, VA	30.0	30.0	10	2.9	27.2	27.2
Mid-Atlantic Morehead City and Beaufort, NC						
	20.0	25.0	8	6.7	13.3	18.3
Mid-Atlantic Wilmington, NC						
	20.0	20.0	8	4.1	15.9	15.9
Mid-Atlantic Georgetown, SC						
	20.0	30.0	10	5.6	14.4	24.4
Mid-Atlantic Charleston, SC						
	20.0	25.0	8	12.5	7.5	12.5
Mid-Atlantic Savannah, GA						
	25.0	25.0	8	9.7	15.3	15.3
Southeastern US						
Brunswick, GA	24.0	24.0	5	6.7	17.3	17.3
Fernandina, FL	24.0	24.0	6	4.0	20.0	20.0
Jacksonville, FL	24.0	24.0	5	4.2	19.8	19.8
Port Canaveral, FL	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a. not applicable as seasonal management area does not extend to shoreline or no seasonal speed restrictions are proposed.

Source: Russell, Knowlton and Beaudin Ring, Vessel Traffic-Management Scenarios Based on Recommended Measures to Reduce Ship Strikes of Northern Right Whales, December 2003 and U.S. Coast Pilots 2, 3, 4.

For the port areas of Boston and Salem, we have assumed that half of the vessels arrive from a northern routing and half from a southern or eastern routing. Vessels arriving in Boston from the northern routing will not be affected by the proposed seasonal speed restrictions. Vessels approaching from the south, will encounter the

seasonal speed restrictions proposed for the Cape Cod Bay Management Area for vessel using the Cape Cod Canal. Vessels approaching from the east will encounter the speed restrictions proposed for the Off Race Point Management Area. Vessels will need to traverse about 50 nautical miles through either of these management areas. Taking into consideration the mix of traffic in these port areas, an average of 25 nautical miles was assumed as the effective distance for proposed seasonal speed restrictions.¹⁹

Impact on Vessel Operations

The primary impact of the ANPR on vessel operations is due to the establishment of seasonal speed restrictions. In the base case scenario, we assume a uniform speed restriction of 12 knots for all affected port areas. Using the economic impact model, we have identified the minutes of delay that will be incurred in each port area, taking into account the distribution of vessel arrivals, normal vessel operating speeds, and the effective distance over which the restriction will apply. Table 3-7 presents the average minutes of delay for a speed restriction of 12 knots per vessel arrival by type of vessel for each affected port area in 2002²⁰. The overall average delay for all vessels in 2002 is 31 minute per arrival²¹.

Figure 3-14 shows in graphic form the average delay by port area. The longest average delay is experienced at the port area of Hampton Roads with an average delay of 52 minutes per arrival. This is due to the predominance of large and fast containerships at the port area coupled with the relatively few arrivals of smaller and slower vessel types. The port areas of Baltimore (39 minutes) and New York (36 minutes) are the only other port areas with average delays in excess of 30 minutes²².

19 For these two port areas, the location of the pilot buoy is not relevant as the proposed management areas do not extend to the shoreline.

20 Appendix F presents detailed tables of the minutes of delay by vessel type and size for each port at the base case speed restriction of 12 knots and for alternative speed restrictions of 10, 11, 13 and 14 knots.

21 As will be discussed later, vessels should be generally expected to incur similar delays when leaving each port area.

22 The port area of Sandwich, MA shows an average delay of 40 minutes. However, this is an aberration due to a single tanker restricted period vessel call in 2002 and the longer maximum effective distance of 45 nautical miles.

Table 3-7. Estimated Minutes of Delay per Vessel Arrival for Speed Restriction of 12 Knots by Port Area and Type of Vessel, 2002

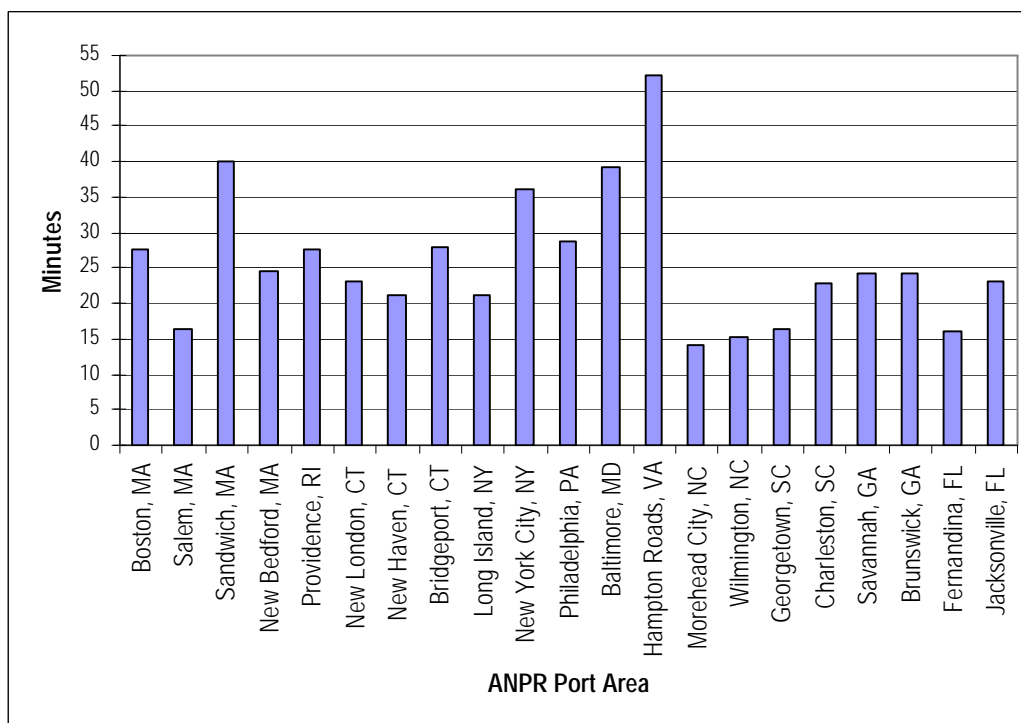
ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	4.3	-	53.6	-	27.0	41.7	-	27.4	15.4	20.7	-	-	27.7
Salem, MA	11.9	-	-	-	-	-	30.2	-	-	-	-	-	16.5
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	40.2	-	-	40.2
Mid-Atlantic Block Island Sound													
New Bedford, MA	13.4	-	-	42.6	18.5	43.8	36.2	-	-	21.7	-	-	24.7
Providence, RI	8.9	21.9	52.5	-	22.1	42.6	-	53.4	-	23.0	-	-	27.5
New London, CT	13.2	-	-	-	41.8	50.0	-	-	17.8	24.2	-	-	23.2
New Haven, CT	11.8	-	60.2	-	39.6	-	46.3	52.5	19.6	22.5	14.1	-	21.1
Bridgeport, CT	21.9	-	-	-	23.3	-	46.3	24.8	19.1	18.0	-	-	28.0
Long Island, NY	-	-	-	0.6	-	37.5	-	-	18.4	23.7	-	-	21.2
Mid-Atlantic Ports of New York/New Jersey	8.7	16.5	50.0	-	30.1	35.2	35.0	40.8	18.2	19.1	10.9	-	36.1
Mid-Atlantic Delaware Bay	8.9	19.3	43.3	27.9	30.1	43.5	41.6	41.5	21.6	24.4	12.9	-	28.8
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	11.7	18.2	58.1	-	34.1	44.1	37.3	49.3	12.8	21.6	12.8	-	39.3
Hampton Roads, VA	11.2	20.2	59.2	-	30.8	41.5	47.2	53.6	-	22.9	-	-	52.2
Mid-Atlantic Morehead City and Beaufort, NC	3.5	-	40.9	-	20.0	-	-	32.0	-	13.8	-	-	14.0
Mid-Atlantic Wilmington, NC	4.0	7.1	36.0	-	17.2	-	-	28.9	10.5	12.1	7.5	-	15.3
Mid-Atlantic Georgetown, SC	6.2	-	56.7	-	33.2	-	-	42.7	-	-	-	-	16.3
Mid-Atlantic Charleston, SC	5.1	-	27.7	13.6	17.9	19.4	17.8	22.5	9.4	10.4	5.9	-	22.8
Mid-Atlantic Savannah, GA	3.6	4.6	32.9	-	19.8	28.7	32.0	28.7	10.6	12.2	7.2	-	24.2
Southeastern US													
Brunswick, GA	3.1	-	33.7	-	25.1	-	29.4	29.9	-	12.3	-	-	24.2
Fernandina, FL	5.9	-	18.6	0.4	12.6	-	30.9	-	-	-	-	-	16.0
Jacksonville, FL	7.7	10.3	32.8	18.6	16.0	24.8	23.9	33.3	14.2	16.1	9.3	-	23.1
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8.0	15.8	42.4	19.6	24.0	35.6	40.1	38.2	17.0	19.3	9.7	-	30.5

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Figure 3-14. Average Minutes of Delay due to Speed Restriction of 12 Knots per Vessel Arrival by Port Area, 2002



Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

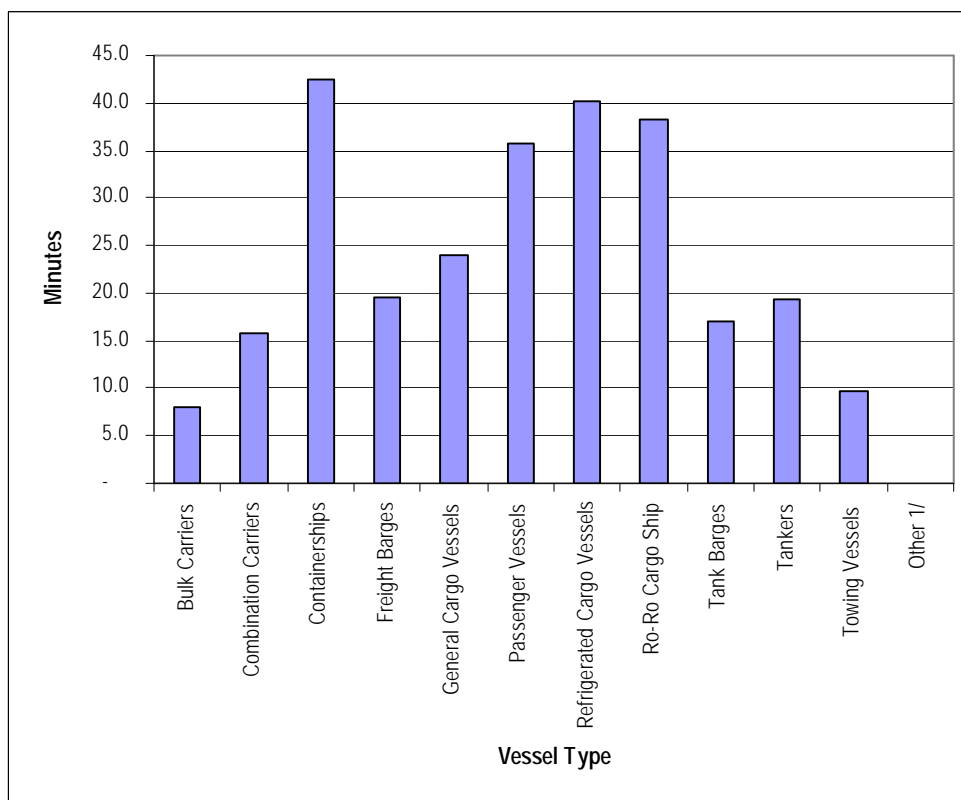
Figure 3-15 presents average delays by vessel type. Containerships incur the longest average delay with an average of 42 minutes per vessel arrival followed closely by refrigerated cargo vessels (40 minutes), Ro-Ro cargo ships (38 minutes) and passenger vessels (36 minutes).

A study conducted in 2003 analyzed the additional time required for vessels to decelerate from sea speed to the restricted speed as part of the impact of proposed speed restrictions²³. Some vessels were assumed to take as long as an hour to slow to the restricted speed. Shipping industry representatives claim that this time is an additional impact associated with the proposed speed restrictions. We disagree and have not included such slowing time in the calculations. Even without the speed restrictions, most vessels will have to slow down for the pilot to board or as they approach the port. Even though the location at which the vessel commences to slow may be different with the proposed seasonal speed restrictions, there is no additional vessel time involved²⁴.

²³ Russell, Knowlton and Beaudin-Ring, Vessel Traffic-Management Scenarios based on Recommended Measures to Reduce Ship Strikes of Northern Right Whales, December 2003.

²⁴ The point may be valid for dynamic management areas measures implemented away from the shoreline when vessels could resume speed before approaching the port area.

Figure 3-15. Average Minutes of Delay due to Speed Restrictions of 12 Knots per Vessel Arrival by Type of Vessel, 2002



Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Estimated Direct Economic Impact

In this section we assess the direct economic impact of the ANPR on vessel operating costs. We first estimate the impact due to the implementation of the proposed seasonal speed restrictions by port area, followed by a determination of the potential economic impact of the dynamic area management measures. The section concludes with a presentation of the estimated total direct economic impact by port area.

SEASONAL MANAGEMENT AREAS

Table 3-8 presents the estimated cost of delays per vessel call for seasonal speed restrictions of 12 knots by type of vessel and port area in 2002. We define a vessel call as an arrival and departure from a port area. It is assumed that vessels will incur operating delays on departure equal to those calculated for vessel arrivals. For the U.S. East Coast, the average increase in restricted period vessel operating costs is \$1,230 per vessel call.

The average cost of delays is highest for the port area of Hampton Roads at \$2,318 per restricted period vessel call. This reflects the distribution of container and other large vessels calling at this port area that was discussed under preceding section on operational impact. Other port areas with high average cost of delays per restricted period vessel call are New York (\$776), Providence (\$1,468), Baltimore (\$1,417), and New Bedford (\$1,351).

In terms of type of vessel, the highest cost of delay per restricted period call is for passenger vessels at \$3,808 per call. Refrigerated cargo vessels are second at \$2,254 per call, followed by containerships at \$1,874 per call.

It is important to consider the volume and distribution of vessel traffic at each port area to properly understand the significance of the direct economic impact of the proposed seasonal speed restrictions. Figure 3-16 presents the estimated annual direct economic impact of a seasonal speed restriction of 12 knots by port area for 2002 and 2003. The port area of New York by far has the highest direct economic impact of \$3.4 million in 2002 and \$3.7 million in 2003. The port area of Hampton Roads is next with \$2.3 million in 2002 and \$2.3 million in 2003. These are followed in 2002 by the port areas of Charleston (\$1.5 million), Philadelphia (\$1.4 million), Savannah (\$1.2 million) and Baltimore (\$1.1 million). In 2003 the ranking are the same except that the position of Charleston and Philadelphia are reversed.

These six port areas account for 88 percent of the estimated direct economic impact of the seasonal speed restrictions in 2002 and 87 percent in 2003. Of all remaining 20 U.S. East Coast port areas, only Jacksonville (\$524 thousand in 2002 and \$522 thousand in 2003) has a direct economic impact greater than \$200 thousand per year.

Table 3-8. Estimated Cost of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Type of Vessel, 2002

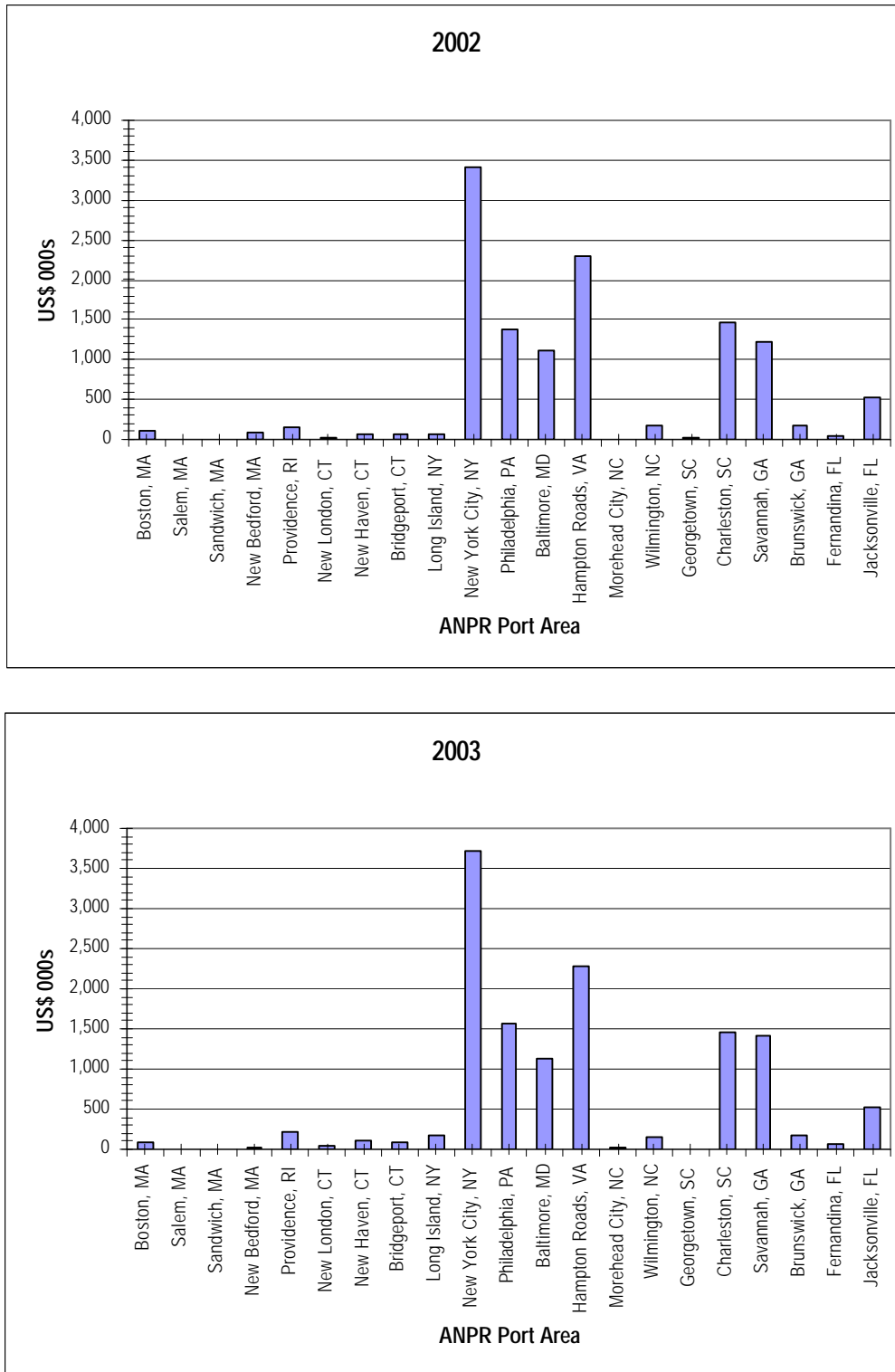
ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	90.8	-	2,265.8	-	820.3	4,641.7	-	712.0	370.4	564.6	-	-	1,041.7
Salem, MA	252.7	-	-	-	-	-	1,384.2	-	-	-	-	-	535.6
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound													
New Bedford, MA	291.3	-	-	1,072.8	371.9	4,313.9	1,661.1	-	-	539.7	-	-	1,350.7
Providence, RI	182.8	546.1	1,317.1	-	419.9	4,148.2	-	1,622.1	-	605.2	-	-	1,467.7
New London, CT	291.0	-	-	-	1,133.1	5,570.0	-	-	429.9	636.0	-	-	821.0
New Haven, CT	253.8	-	1,859.7	-	1,373.9	-	2,357.3	1,448.8	476.9	599.7	332.4	-	572.3
Bridgeport, CT	520.1	-	-	-	324.6	-	2,357.3	631.5	465.6	452.8	-	-	1,060.2
Long Island, NY	-	-	-	6.9	-	3,057.7	-	-	446.7	731.2	-	-	706.7
Mid-Atlantic Ports of New York/New Jersey	190.3	424.5	2,266.3	-	1,132.9	3,773.7	1,769.1	1,409.9	470.3	541.6	257.1	-	1,551.2
Mid-Atlantic Delaware Bay	192.2	550.7	1,345.0	523.5	730.8	6,411.2	2,399.5	1,119.6	575.5	797.7	304.7	-	1,004.2
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	287.9	468.6	2,373.9	-	1,097.6	4,813.5	1,818.3	1,639.0	300.8	583.2	300.8	-	1,416.7
Hampton Roads, VA	266.9	548.0	2,752.3	-	987.4	4,283.0	3,025.7	2,336.8	-	673.2	-	-	2,318.0
Mid-Atlantic Morehead City and Beaufort, NC	71.0	-	1,726.1	-	415.2	-	-	883.8	-	349.3	-	-	366.5
Mid-Atlantic Wilmington, NC	83.1	172.5	1,793.3	-	684.7	-	-	1,130.5	255.2	318.8	176.2	-	576.5
Mid-Atlantic Georgetown, SC	131.0	-	2,885.8	-	1,526.1	-	-	1,178.4	-	-	-	-	632.2
Mid-Atlantic Charleston, SC	112.5	-	1,294.3	230.9	742.5	2,300.9	900.3	708.8	238.6	285.5	138.5	-	1,022.0
Mid-Atlantic Savannah, GA	76.2	104.1	1,548.6	-	803.9	5,937.6	2,713.2	1,041.5	264.7	328.1	169.5	-	1,060.2
Southeastern US													
Brunswick, GA	66.3	-	1,260.2	-	1,017.7	-	1,621.6	846.8	-	311.5	-	-	747.2
Fernandina, FL	128.3	-	379.4	4.6	473.1	-	1,571.5	-	-	-	-	-	493.3
Jacksonville, FL	169.4	234.6	1,000.0	326.7	596.2	2,018.1	1,096.3	927.7	357.8	436.8	219.4	-	673.3
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	180.2	421.4	1,873.6	353.0	811.9	3,807.6	2,253.7	1,255.3	416.8	570.0	227.8	-	1,229.7

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Figure 3-16. Estimated Direct Economic Impact of Seasonal Speed Restriction of 12 Knots on by Port Area, 2002 and 2003



Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-9 and Table 3-10 present the estimated direct economic impact of a seasonal speed restriction of 12 knots by type of vessel and port area for 2002 and 2003, respectively. In each year, 59 percent of the direct economic impact is incurred by containerships with \$7.3 million in 2002 and \$7.7 million in 2003. This is more than four times the direct economic impact incurred by the next vessel type, Ro-Ro cargo ships (about \$1.7 million each year).

The next four tables show the direct economic impact for foreign flag vessels and U.S. flag vessels. The direct economic impact of seasonal speed restrictions on foreign-flag vessels is presented in Table 3-11 for 2002 and Table 3-12 for 2003. Foreign flag vessels account for approximately 90 percent of the total direct economic impact each year. Thus, in 2002 the economic impact incurred by foreign vessels is \$11.2 million and in 2003, \$12.0 million. As foreign flag vessels account for such a large proportion of total traffic, the observations of direct economic impact by port area and type of vessel discussed earlier for total traffic are applicable.

Table 3-13 and Table 3-14 present the direct economic impact of seasonal speed restrictions incurred by U.S. flag vessels in 2002 and 2003, respectively. The total direct economic impact for U.S. flag vessels is estimated at \$1.2 million in 2002 and \$1.3 million in 2003. Due to the composition and traffic patterns of the U.S. flag fleet, there are differences in the ranking of economic impact by port area as compared to foreign flag results. The port area of Charleston has the highest economic impact at \$278 thousand in 2002, placing it ahead of Hampton Roads (\$204 thousand) and New York (\$176 thousand). The port area of Jacksonville had an estimated economic impact for U.S. flag vessel of \$162 thousand in 2002 placing it fourth. No other port area had an economic impact greater than \$60 thousand in 2002.

The port area rankings and comments regarding the direct economic impact of seasonal speed restrictions incurred by U.S. flag vessels observed for 2002 also apply for 2003.

In terms of type of vessel, containerships account for 62 percent of the economic impact incurred in 2002 by U.S. flag vessels; in 2003, it dropped to 54 percent. Ro-Ro cargo ships and tankers together account for approximately 20 percent of the U.S. flag vessels economic impact each year. In 2003, U.S. flag tank barges accounted for 13 percent of the total economic impact as there was a substantial increase in number of restricted period U.S. flag tank barge arrivals at the port area of Long Island.

Table 3-9. Estimated Direct Economic Impact of Seasonal Speed Restriction of 12 Knots by Port Area and Type of Vessel, 2002 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	0.6	-	40.8	-	2.5	18.6	-	12.8	0.4	25.4	-	-	101.0
Salem, MA	0.8	-	-	-	-	-	1.4	-	-	-	-	-	2.1
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2
Mid-Atlantic Block Island Sound													
New Bedford, MA	5.2	-	-	1.1	5.6	51.8	14.9	-	-	1.1	-	-	79.7
Providence, RI	4.8	1.1	1.3	-	2.5	99.6	-	19.5	-	15.1	-	-	143.8
New London, CT	0.9	-	-	-	3.4	5.6	-	-	4.3	0.6	-	-	14.8
New Haven, CT	7.1	-	1.9	-	15.1	-	2.4	1.4	17.6	24.6	2.0	-	72.1
Bridgeport, CT	1.0	-	-	-	0.6	-	47.1	1.9	13.5	3.6	-	-	67.9
Long Island, NY	-	-	-	0.0	-	21.4	-	-	28.6	26.3	-	-	76.3
Mid-Atlantic Ports of New York/New Jersey	27.8	7.2	2,223.3	-	69.1	317.0	17.7	434.3	0.5	312.5	1.8	-	3,411.1
Mid-Atlantic Delaware Bay	41.9	9.4	326.8	6.8	107.4	32.1	379.1	91.8	5.2	369.3	4.0	-	1,373.8
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	39.4	1.4	417.8	-	108.7	48.1	10.9	452.4	0.6	40.2	2.4	-	1,122.0
Hampton Roads, VA	37.1	2.7	1,912.9	-	77.0	12.8	9.1	184.6	-	58.6	-	-	2,294.8
Mid-Atlantic Morehead City and Beaufort, NC	0.5	-	1.7	-	2.1	-	-	0.9	-	1.0	-	-	6.2
Mid-Atlantic Wilmington, NC	5.3	0.7	77.1	-	42.4	-	-	14.7	2.6	35.7	0.2	-	178.7
Mid-Atlantic Georgetown, SC	2.5	-	5.8	-	7.6	-	-	1.2	-	-	-	-	17.1
Mid-Atlantic Charleston, SC	12.7	-	1,193.3	0.2	69.1	52.9	3.6	98.5	5.0	28.3	1.9	-	1,465.6
Mid-Atlantic Savannah, GA	10.2	0.6	916.8	-	114.2	11.9	10.9	101.0	1.9	51.2	1.7	-	1,220.2
Southeastern US													
Brunswick, GA	3.1	-	12.6	-	34.6	-	6.5	127.9	-	0.6	-	-	185.3
Fernandina, FL	0.4	-	15.9	0.0	18.4	-	12.6	-	-	-	-	-	47.4
Jacksonville, FL	10.7	0.5	189.0	17.6	73.9	6.1	2.2	170.7	2.9	36.3	14.0	-	523.8
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	212.1	23.6	7,337.0	25.8	754.3	677.7	518.3	1,713.5	82.9	1,031.7	28.0	-	12,404.9

a/ Includes recreational vessels.

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-10. Estimated Direct Economic Impact of Seasonal Speed Restriction of 12 Knots by Port Area and Type of Vessel, 2003 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	0.0	-	31.9	-	0.5	23.7	1.4	3.2	-	29.8	-	-	90.5
Salem, MA	0.3	-	-	-	-	2.5	-	-	-	-	-	-	2.8
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Mid-Atlantic Block Island Sound													
New Bedford, MA	7.0	-	-	-	3.2	-	6.6	-	-	1.5	-	-	18.3
Providence, RI	5.8	-	0.7	-	6.3	127.7	3.3	36.7	-	25.7	0.3	-	206.6
New London, CT	1.9	-	-	-	8.9	12.2	-	-	9.4	1.3	-	-	33.7
New Haven, CT	7.3	-	-	0.8	16.5	12.2	-	-	33.9	46.0	1.7	-	118.3
Bridgeport, CT	6.7	-	-	0.0	0.3	3.1	44.8	-	26.0	7.9	-	-	88.8
Long Island, NY	-	-	-	0.0	-	39.8	-	-	76.8	59.3	1.0	-	176.9
Mid-Atlantic Ports of New York/New Jersey	35.2	6.7	2,390.6	-	20.1	399.8	18.7	455.0	5.1	393.4	2.8	-	3,727.5
Mid-Atlantic Delaware Bay	32.3	3.5	388.1	1.8	74.4	72.1	544.5	85.2	4.5	364.6	2.1	-	1,573.1
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	43.7	1.3	368.9	-	82.1	60.5	6.4	497.0	0.9	60.5	1.2	-	1,122.5
Hampton Roads, VA	40.7	4.3	1,947.5	0.3	50.8	24.3	2.1	142.5	1.8	72.1	0.3	-	2,286.9
Mid-Atlantic Morehead City and Beaufort, NC	0.9	-	5.8	-	6.9	-	0.3	1.6	-	5.7	-	-	21.1
Mid-Atlantic Wilmington, NC	5.4	0.7	58.5	-	38.3	-	0.9	13.9	3.0	34.6	0.2	-	155.5
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	10.2	-	1,194.8	-	49.1	64.0	2.4	99.8	3.9	34.8	1.8	-	1,460.7
Mid-Atlantic Savannah, GA	12.0	1.2	1,162.6	-	78.1	4.7	22.3	77.3	1.0	51.1	0.3	-	1,410.5
Southeastern US													
Brunswick, GA	2.8	-	19.3	-	23.3	1.8	7.8	121.0	-	1.5	-	-	177.4
Fernandina, FL	0.8	-	20.8	0.0	20.1	2.0	18.9	-	-	-	1.6	-	64.1
Jacksonville, FL	12.0	-	174.5	24.0	47.8	19.5	3.7	168.9	2.7	44.9	24.1	-	522.1
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	225.0	17.7	7,764.2	26.9	526.6	869.9	684.0	1,702.1	169.0	1,241.6	37.5	-	13,264.5

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-11. Estimated Economic Impact of Seasonal Speed Restrictions on Foreign Flag Vessels by Port Area and Type of Vessel, 2002 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	0.6	-	40.8	-	2.5	18.6	-	12.8	-	25.1	-	-	100.4
Salem, MA	0.8	-	-	-	-	-	1.4	-	-	-	-	-	2.1
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2
Mid-Atlantic Block Island Sound													
New Bedford, MA	2.4	-	-	-	5.6	33.4	14.9	-	-	1.1	-	-	57.4
Providence, RI	4.8	1.1	1.3	-	2.5	96.5	-	17.7	-	13.1	-	-	137.0
New London, CT	0.9	-	-	-	3.4	5.6	-	-	-	-	-	-	9.8
New Haven, CT	7.1	-	1.9	-	15.1	-	2.4	1.4	1.8	21.1	-	-	50.7
Bridgeport, CT	1.0	-	-	-	0.6	-	47.1	1.9	0.9	0.7	-	-	52.3
Long Island, NY	-	-	-	-	-	3.1	-	-	-	21.2	-	-	24.2
Mid-Atlantic Ports of New York/New Jersey	27.8	7.2	2,086.8	-	69.1	317.0	17.7	428.4	-	281.4	-	-	3,235.4
Mid-Atlantic Delaware Bay	41.9	9.4	308.0	-	106.9	32.1	379.1	91.8	0.6	345.1	0.3	-	1,315.1
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	39.4	1.4	417.8	-	105.6	48.1	10.9	408.2	-	35.0	-	-	1,066.5
Hampton Roads, VA	36.0	2.7	1,716.4	-	75.7	12.8	9.1	182.8	-	55.0	-	-	2,090.7
Mid-Atlantic Morehead City and Beaufort, NC	0.3	-	1.7	-	2.1	-	-	-	-	1.0	-	-	5.1
Mid-Atlantic Wilmington, NC	5.3	0.7	74.4	-	40.9	-	-	14.1	-	29.4	-	-	164.8
Mid-Atlantic Georgetown, SC	2.5	-	2.6	-	7.6	-	-	1.2	-	-	-	-	13.9
Mid-Atlantic Charleston, SC	11.8	-	948.9	0.2	68.1	50.4	3.6	81.7	-	22.9	0.1	-	1,187.7
Mid-Atlantic Savannah, GA	10.2	0.6	862.7	-	113.4	11.9	10.9	100.3	-	44.2	-	-	1,154.1
Southeastern US													
Brunswick, GA	3.1	-	12.6	-	34.6	-	6.5	100.2	-	0.6	-	-	157.6
Fernandina, FL	0.4	-	15.9	-	18.4	-	12.6	-	-	-	-	-	47.3
Jacksonville, FL	10.4	0.5	123.5	-	66.1	-	2.2	128.4	-	30.4	0.2	-	361.8
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	206.6	23.6	6,615.4	0.2	738.5	629.4	518.3	1,571.0	3.3	928.3	0.7	-	11,235.2

a/ Includes recreational vessels.

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-12. Estimated Economic Impact of Seasonal Speed Restrictions on Foreign Flag Vessels by Port Area and Type of Vessel, 2003 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	0.0	-	31.9	-	0.5	23.7	1.4	1.3	-	29.2	-	-	88.0
Salem, MA	0.3	-	-	-	-	2.5	-	-	-	-	-	-	2.8
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Mid-Atlantic Block Island Sound													
New Bedford, MA	5.6	-	-	-	3.2	-	6.6	-	-	1.5	-	-	16.9
Providence, RI	5.8	-	0.7	-	6.3	127.7	3.3	36.7	-	22.0	-	-	202.5
New London, CT	1.9	-	-	-	8.9	-	-	-	-	0.7	-	-	11.5
New Haven, CT	7.3	-	-	-	16.5	-	-	-	-	38.6	-	-	62.3
Bridgeport, CT	6.7	-	-	-	0.3	-	44.8	-	-	3.3	-	-	55.1
Long Island, NY	-	-	-	-	-	-	-	-	-	40.3	-	-	40.3
Mid-Atlantic Ports of New York/New Jersey	35.2	6.7	2,226.7	-	20.1	399.8	18.7	449.2	-	353.0	0.3	-	3,509.7
Mid-Atlantic Delaware Bay	31.9	3.5	388.1	-	74.4	72.1	544.5	85.2	-	351.0	-	-	1,550.6
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	43.7	1.3	367.2	-	81.6	60.5	6.4	460.7	0.5	58.6	-	-	1,080.5
Hampton Roads, VA	39.6	4.3	1,751.5	-	45.4	21.6	2.1	134.9	1.8	66.6	0.3	-	2,068.1
Mid-Atlantic Morehead City and Beaufort, NC	0.7	-	5.8	-	6.9	-	0.3	-	-	5.7	-	-	19.3
Mid-Atlantic Wilmington, NC	5.0	0.7	57.8	-	36.8	-	0.9	11.3	-	29.7	-	-	142.3
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	10.2	-	941.1	-	48.5	60.2	2.4	81.2	-	27.7	-	-	1,171.3
Mid-Atlantic Savannah, GA	12.0	1.2	1,128.1	-	78.1	3.1	22.3	76.4	-	43.3	-	-	1,364.5
Southeastern US													
Brunswick, GA	2.8	-	19.3	-	23.3	-	7.8	101.4	-	1.5	-	-	156.0
Fernandina, FL	0.8	-	20.8	-	20.1	-	18.9	-	-	-	-	-	60.6
Jacksonville, FL	12.0	-	126.6	0.0	45.0	7.4	3.7	139.2	-	34.0	0.4	-	368.3
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	221.5	17.7	7,065.8	0.0	515.8	778.6	684.0	1,577.5	2.3	1,113.7	1.0	-	11,977.8

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-13. Estimated Economic Impact of Seasonal Speed Restrictions on U.S. Flag Vessels by Port Area and Type of Vessel, 2002 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	-	-	-	-	-	-	-	-	0.4	0.3	-	-	0.6
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound													
New Bedford, MA	2.9	-	-	1.1	-	18.3	-	-	-	-	-	-	22.3
Providence, RI	-	-	-	-	-	3.1	-	1.7	-	2.0	-	-	6.8
New London, CT	-	-	-	-	-	-	-	-	4.3	0.6	-	-	4.9
New Haven, CT	-	-	-	-	-	-	-	-	15.9	3.5	2.0	-	21.4
Bridgeport, CT	-	-	-	-	-	-	-	-	12.6	3.0	-	-	15.6
Long Island, NY	-	-	-	0.0	-	18.3	-	-	28.6	5.2	-	-	52.1
Mid-Atlantic Ports of New York/New Jersey	-	-	136.5	-	-	-	-	5.8	0.5	31.1	1.8	-	175.7
Mid-Atlantic Delaware Bay	-	-	18.9	6.8	0.5	-	-	-	4.6	24.2	3.7	-	58.6
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	-	-	-	-	3.1	-	-	44.2	0.6	5.3	2.4	-	55.5
Hampton Roads, VA	1.1	-	196.4	-	1.3	-	-	1.8	-	3.6	-	-	204.2
Mid-Atlantic Morehead City and Beaufort, NC	0.2	-	-	-	-	-	-	0.9	-	-	-	-	1.1
Mid-Atlantic Wilmington, NC	-	-	2.8	-	1.5	-	-	0.6	2.6	6.3	0.2	-	13.9
Mid-Atlantic Georgetown, SC	-	-	3.2	-	-	-	-	-	-	-	-	-	3.2
Mid-Atlantic Charleston, SC	1.0	-	244.4	-	0.9	2.5	-	16.9	5.0	5.4	1.8	-	277.8
Mid-Atlantic Savannah, GA	-	-	54.1	-	0.7	-	-	0.7	1.9	7.0	1.7	-	66.1
Southeastern US													
Brunswick, GA	-	-	-	-	-	-	-	27.7	-	-	-	-	27.7
Fernandina, FL	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0
Jacksonville, FL	0.3	-	65.5	17.6	7.8	6.1	-	42.3	2.9	5.9	13.8	-	162.1
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	5.4	-	721.6	25.5	15.8	48.4	-	142.5	79.7	103.4	27.4	-	1,169.7

a/ Includes recreational vessels.

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-14. Estimated Economic Impact of Seasonal Speed Restrictions on U.S. Flag Vessels by Port Area and Type of Vessel, 2003 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point													
Boston, MA	-	-	-	-	-	-	-	1.9	-	0.6	-	-	2.5
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound													
New Bedford, MA	1.4	-	-	-	-	-	-	-	-	-	-	-	1.4
Providence, RI	-	-	-	-	-	-	-	-	-	3.7	0.3	-	4.1
New London, CT	-	-	-	-	-	12.2	-	-	9.4	0.5	-	-	22.2
New Haven, CT	-	-	-	0.8	-	12.2	-	-	33.9	7.4	1.7	-	56.0
Bridgeport, CT	-	-	-	0.0	-	3.1	-	-	26.0	4.7	-	-	33.7
Long Island, NY	-	-	-	0.0	-	39.8	-	-	76.8	19.0	1.0	-	136.5
Mid-Atlantic Ports of New York/New Jersey	-	-	163.8	-	-	-	-	5.8	5.1	40.4	2.6	-	217.8
Mid-Atlantic Delaware Bay	0.5	-	-	1.8	-	-	-	-	4.5	13.6	2.1	-	22.5
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	-	-	1.7	-	0.5	-	-	36.3	0.4	1.9	1.2	-	42.0
Hampton Roads, VA	1.1	-	196.1	0.3	5.5	2.8	-	7.6	-	5.5	-	-	218.8
Mid-Atlantic Morehead City and Beaufort, NC	0.2	-	-	-	-	-	-	1.6	-	-	-	-	1.8
Mid-Atlantic Wilmington, NC	0.4	-	0.7	-	1.5	-	-	2.6	3.0	4.9	0.2	-	13.2
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	253.7	-	0.6	3.8	-	18.6	3.9	7.1	1.8	-	289.5
Mid-Atlantic Savannah, GA	-	-	34.5	-	-	1.6	-	0.9	1.0	7.8	0.3	-	46.0
Southeastern US													
Brunswick, GA	-	-	-	-	-	1.8	-	19.6	-	-	-	-	21.3
Fernandina, FL	-	-	-	0.0	-	2.0	-	-	-	-	1.6	-	3.6
Jacksonville, FL	-	-	47.9	24.0	2.8	12.1	-	29.7	2.7	10.9	23.7	-	153.8
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3.6	-	698.4	26.9	10.9	91.3	-	124.6	166.7	127.9	36.5	-	1,286.7

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

DYNAMIC MANAGEMENT AREAS

The ANPR specifies that all areas along the Atlantic seaboard within the U.S. Exclusive Economic Zone would be subject to dynamic area management if certain concentrations of right whales were sighted outside of the seasonal speed restrictions periods. If triggered, a precautionary area would be established for a limited period of time around a certain concentration of right whales, and ships would be directed either to divert around these areas or reduce their speed and proceed through the designated area with caution.

The ANPR does not provide specifics as to when or how a dynamic management area would be implemented. A research paper submitted to the NMFS Northeast Implementation Team provided recommendations as to possible trigger events²⁵:

- a single sighting/detection of 3 or more animals;
- two or more sightings/detection within one day totaling three or more animals with the sightings within 10 miles of each other;
- a sighting/detection of a mother/calf pair within 15 nm of a shipping lane;
- a sighting/detection of 2 or more animals closer than 10 miles to each other within a designated shipping lane if those animals are thought to be resident or feeding (note: this trigger was not used in this report since the historical data were not clear about feeding or resident behavior); and
- a sighting/detection of one or more animals in the Cape Cod Canal or any harbor area.

The research has analyzed data on the sighting of right whales in the Northeast over a period totaling 12 years; 1979-1981, 1987-1989, 1991, and 1998-2002. Table 3-15 presents our assumptions regarding the diameter of the DMAs in nautical miles and the number of days each year that a DMA area would be implemented for each port area. We have used the research paper's mean number of days and nautical miles per occurrence of a DMA over the 1998-2002 period analyzed. Yet for port areas except Boston, the likelihood of a DMA occurrence in any single year is less than 50 percent. We conservatively assume that a vessel would slow to the restricted speed of 12 knots and would traverse the full distance through an established DMA. However, it is more likely that a vessel would route entirely around the DMA or cross only a portion of the designated area.

²⁵ Russell, Knowlton and Beaudin-Ring, Vessel Traffic-Management Scenarios based on Recommended Measures to Reduce Ship Strikes of Northern Right Whales, December 2003.

Table 3-15. Estimated Size and Effective Days per Year of Dynamic Area Management by Port Area

ANPR Port Region and Port Area	Diameter of dynamic area management nautical miles	Estimated effective days
Northeastern US - Gulf of Maine		
Eastport, ME	32	16
Searsport, ME	32	16
Portland, ME	32	16
Portsmouth, NH	32	16
Northeastern US - Off Race Point		
Boston, MA	54	39
Salem, MA	54	39
Northeastern US - Cape Cod Bay	12	3
Mid-Atlantic Block Island Sound		
New Bedford, MA	26	9
Providence, RI	26	9
New London, CT	26	9
New Haven, CT	26	9
Bridgeport, CT	26	9
Long Island, NY	26	9
Mid-Atlantic Ports of New York/New Jersey	30	13
Mid-Atlantic Delaware Bay	30	13
Mid-Atlantic Chesapeake Bay		
Baltimore, MD	30	13
Hampton Roads, VA	30	13
Mid-Atlantic Morehead City and Beaufort, NC	30	13
Mid-Atlantic Wilmington, NC	30	13
Mid-Atlantic Georgetown, SC	30	13
Mid-Atlantic Charleston, SC	30	13
Mid-Atlantic Savannah, GA	30	13
Southeastern US		
Brunswick, GA	30	13
Fernandina, FL	30	13
Jacksonville, FL	30	13
Port Canaveral, FL	30	13

Source: For port areas from Eastport to Bridgeport from Russell, Knowlton and Beaudin Ring, Vessel Traffic-Management Scenarios Based on Recommended Measures to Reduce Ship Strikes of Northern Right Whales, December 2003. Port areas south of Bridgeport prepared by Nathan Associates Inc.

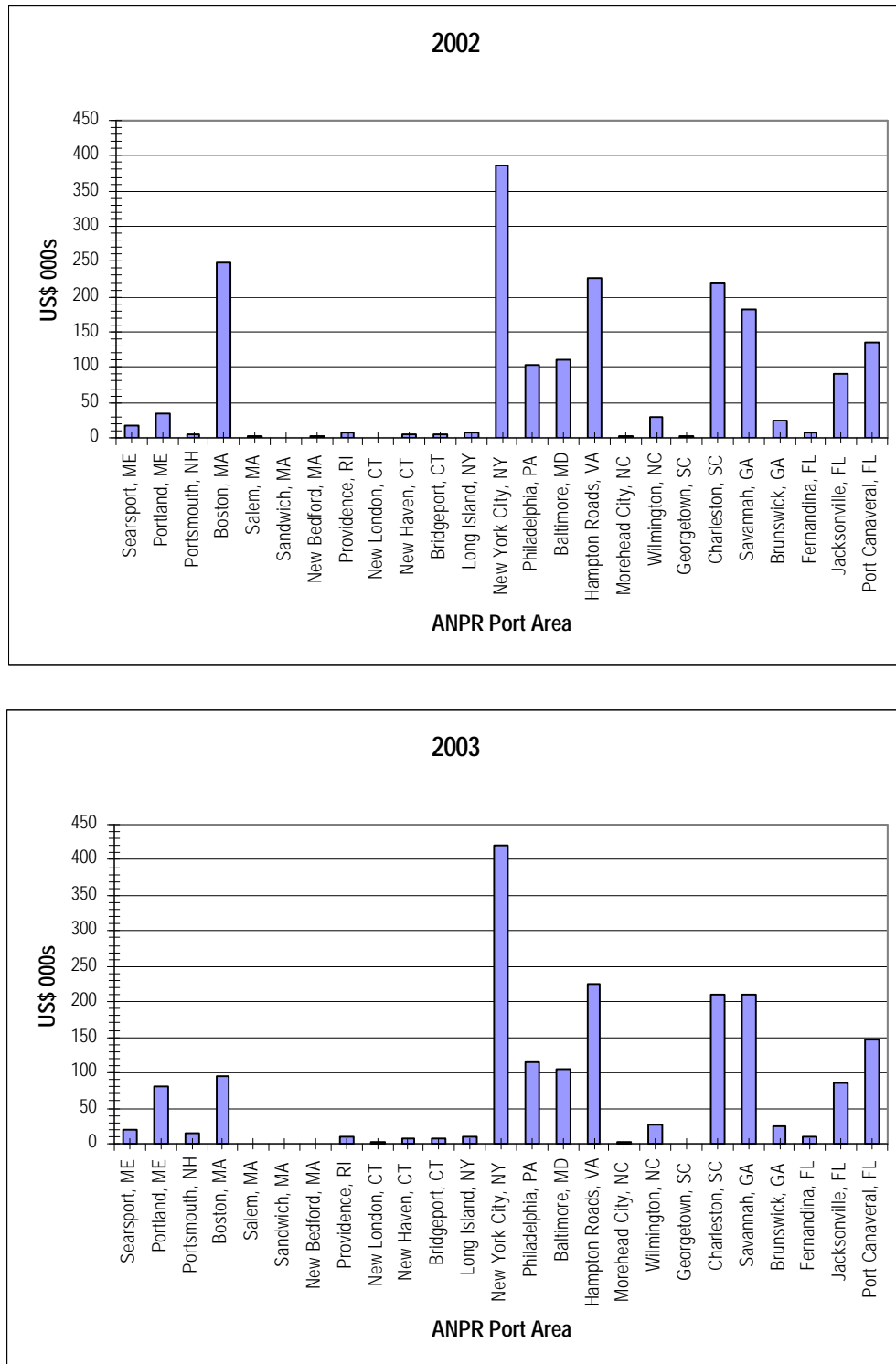
The port areas of Boston and Salem have the most effective days for DMA implementation with 39 days per year. Other port areas are assumed to have 13 days per year such as for the port areas south of Block Island Sound, or 16 days per year for the Gulf of Maine. Exceptions include 3 effective days per year for Cape Cod Bay and 9 days for Block Island Sound.

Figure 3-17 presents the estimated economic impact by port area in 2002 and 2003 corresponding to a speed restriction of 12 knots for dynamic area management. The port area of New York incurs the greatest economic impact of \$387 thousand in 2002. The port area of Boston is second in 2002 with an economic impact of \$249 thousand followed by the port areas of Hampton Roads (\$226 thousand), Charleston (220 thousand) and Savannah (\$181 thousand).

In 2003, the port area of New York has an estimated impact from DMA implementations of \$422 thousand, followed by the port areas of Hampton Roads (\$225 thousand), Charleston and Savannah (each with \$210 thousand) and Port Canaveral (\$147 thousand).

Table 3-16 and Table 3-17 present the economic impact of DMA implementations by type of vessel and port area for 2002 and 2003, respectively. In 2002, the total economic impact due to DAM implementations is estimated at \$1.9 million while in 2003 it is estimated at \$1.8 million. More than 50 percent of the economic impact is incurred by containerships with roughly \$1.0 million each year. Passenger vessels account for 16 percent of the DMA implementation economic followed by Ro-Ro cargo ships with 12 percent of the total.

Figure 3-17. Economic Impact of DMA Implementations with a 12 Knot Speed Restriction, by Port Area 2002 and 2003



Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-16. Economic Impact of DMA Implementations with a 12 Knot Speed Restriction, by Port Area and Type of Vessel, 2002 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	0.1	-	0.7	-	0.6	-	-	-	-	-	-	-	1.4
Searsport, ME	0.0	0.0	-	-	0.0	13.0	-	-	1.4	2.7	0.0	-	17.2
Portland, ME	0.9	0.3	6.1	0.1	1.1	6.4	-	3.8	0.3	14.5	0.0	-	33.6
Portsmouth, NH	0.7	0.0	0.1	0.2	0.3	-	-	-	0.5	2.9	0.0	-	4.7
Northeastern US - Off Race Point													
Boston, MA	2.0	0.1	78.7	0.2	2.6	92.5	-	21.1	0.1	51.7	-	-	249.0
Salem, MA	1.7	-	-	-	-	-	0.6	0.3	-	0.1	-	-	2.8
Northeastern US - Cape Cod Bay	-	0.0	-	-	-	0.2	-	-	-	0.0	-	-	0.2
Mid-Atlantic Block Island Sound													
New Bedford, MA	0.3	-	-	0.0	0.3	2.6	0.4	-	-	0.1	-	-	3.6
Providence, RI	0.4	0.0	0.0	0.0	0.2	3.4	0.1	1.0	0.0	1.3	-	-	6.5
New London, CT	0.0	-	-	-	0.4	0.3	-	-	0.3	0.1	-	-	1.1
New Haven, CT	0.4	-	0.2	0.0	1.4	-	0.1	0.0	1.4	2.2	0.1	-	5.8
Bridgeport, CT	0.1	-	-	-	0.0	-	3.0	0.1	1.0	0.3	-	-	4.5
Long Island, NY	0.0	0.0	-	0.0	0.0	2.0	-	-	2.3	2.4	-	-	6.7
Mid-Atlantic Ports of New York/New Jersey	3.2	0.8	254.4	0.0	5.9	33.7	2.5	50.5	0.0	35.6	0.2	-	386.8
Mid-Atlantic Delaware Bay	3.3	0.6	24.5	0.7	8.5	1.7	27.7	6.8	0.3	29.5	0.3	-	104.0
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	3.9	0.1	39.8	-	9.9	7.8	0.9	45.4	0.1	3.8	0.2	-	111.8
Hampton Roads, VA	3.7	0.3	186.3	-	7.5	4.7	1.1	17.1	-	5.2	0.0	-	226.0
Mid-Atlantic Morehead City and Beaufort, NC	0.1	-	0.5	-	0.2	-	-	0.2	0.0	0.3	-	-	1.3
Mid-Atlantic Wilmington, NC	0.8	0.1	12.8	0.0	6.0	-	0.1	2.7	0.5	6.0	0.0	-	29.0
Mid-Atlantic Georgetown, SC	0.2	0.1	0.5	-	1.5	-	-	0.1	-	-	-	-	2.3
Mid-Atlantic Charleston, SC	2.0	0.0	181.1	0.0	9.5	7.0	0.4	14.3	0.7	4.4	0.2	-	219.6
Mid-Atlantic Savannah, GA	1.5	0.1	139.1	0.0	14.8	1.2	1.4	14.4	0.3	8.1	0.3	-	181.1
Southeastern US													
Brunswick, GA	0.4	-	2.6	-	4.0	-	0.9	17.8	-	0.1	-	-	25.7
Fernandina, FL	0.1	-	2.4	0.0	2.9	0.2	2.6	-	-	-	0.1	-	8.4
Jacksonville, FL	1.7	0.1	32.3	4.0	8.2	0.7	1.0	31.6	0.8	6.4	3.3	-	90.2
Port Canaveral, FL	0.5	0.0	0.9	0.0	2.1	127.9	2.7	0.5	0.0	1.1	0.0	-	135.9
Total	28.0	2.8	963.3	5.4	88.0	305.2	45.4	227.7	10.0	178.7	4.9	-	1,859.3

a/ Includes recreational vessels.

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-17. Economic Impact of DMA Implementations with a 12 Knot Speed Restriction, by Port Area and Type of Vessel, 2003 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	0.6	-	1.4	-	-	-	-	-	-	-	2.0
Searsport, ME	-	0.0	-	-	-	16.9	-	0.0	0.5	2.7	0.0	-	20.2
Portland, ME	3.2	0.7	32.9	0.0	5.6	5.5	-	13.1	0.6	18.2	0.5	-	80.4
Portsmouth, NH	0.8	0.0	8.8	-	0.7	0.1	-	1.0	0.0	3.9	0.0	-	15.4
Northeastern US - Off Race Point													
Boston, MA	1.3	0.0	39.1	0.1	1.1	20.2	1.3	3.2	-	28.8	0.1	-	95.1
Salem, MA	0.5	-	-	-	-	0.6	-	-	-	0.2	-	-	1.2
Northeastern US - Cape Cod Bay	-	-	-	-	-	0.1	-	-	-	0.0	-	-	0.1
Mid-Atlantic Block Island Sound													
New Bedford, MA	0.4	-	0.0	-	0.2	-	0.4	-	0.0	0.1	-	-	1.2
Providence, RI	0.4	0.0	0.0	-	0.4	3.9	0.2	2.2	0.0	1.7	0.0	-	8.8
New London, CT	0.1	-	0.1	-	0.5	2.1	-	-	0.6	0.1	0.0	-	3.6
New Haven, CT	0.4	0.0	0.1	0.0	1.1	0.3	-	-	2.5	3.0	0.1	-	7.4
Bridgeport, CT	0.4	-	0.0	0.0	0.0	0.3	3.3	-	1.8	0.5	-	-	6.3
Long Island, NY	-	0.0	-	0.0	-	2.1	-	-	5.5	3.2	0.0	-	10.9
Mid-Atlantic Ports of New York/New Jersey	3.7	0.9	269.7	0.0	2.3	50.7	3.3	49.2	0.3	41.4	0.2	-	421.6
Mid-Atlantic Delaware Bay	2.4	0.4	29.2	0.4	5.4	4.4	38.4	6.7	0.2	28.5	0.2	-	116.1
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	3.7	0.1	35.0	-	9.3	7.6	0.5	42.7	0.1	5.1	0.2	-	104.3
Hampton Roads, VA	3.7	0.7	187.0	0.0	5.3	6.7	0.1	16.0	0.1	5.6	0.1	-	225.2
Mid-Atlantic Morehead City and Beaufort, NC	0.2	-	1.0	-	1.1	-	0.1	0.2	-	0.9	-	-	3.5
Mid-Atlantic Wilmington, NC	0.7	0.1	9.6	-	7.0	-	0.1	2.4	0.3	5.8	0.0	-	26.0
Mid-Atlantic Georgetown, SC	0.0	-	-	-	0.1	-	-	-	-	-	-	-	0.1
Mid-Atlantic Charleston, SC	1.4	0.0	173.6	-	6.7	7.7	0.4	13.9	0.4	5.3	0.2	-	209.6
Mid-Atlantic Savannah, GA	1.8	0.2	170.8	-	11.9	0.8	2.8	12.8	0.1	8.3	0.1	-	209.6
Southeastern US													
Brunswick, GA	0.3	-	2.5	-	3.5	0.1	1.1	15.8	-	0.1	-	-	23.5
Fernandina, FL	0.1	-	2.4	0.0	3.3	0.2	3.1	0.2	-	0.0	0.1	-	9.4
Jacksonville, FL	1.9	0.1	29.3	4.5	6.9	2.2	0.9	28.4	0.2	7.7	3.5	-	85.5
Port Canaveral, FL	0.6	0.0	1.1	0.0	2.7	137.2	3.1	1.5	0.1	0.7	0.2	-	147.2
Total	27.9	3.3	992.8	5.0	76.3	269.6	59.0	209.2	13.4	172.0	5.5	-	1,834.2

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

TOTAL DIRECT ECONOMIC IMPACT OF ANPR

The total direct economic impact of the ANPR consists of the summation of the economic impacts due to seasonal speed restrictions and the economic impact of DMA implementations. Figure 3-18 presents the estimated economic impact of the ANPR by port area for 2002 and 2003.

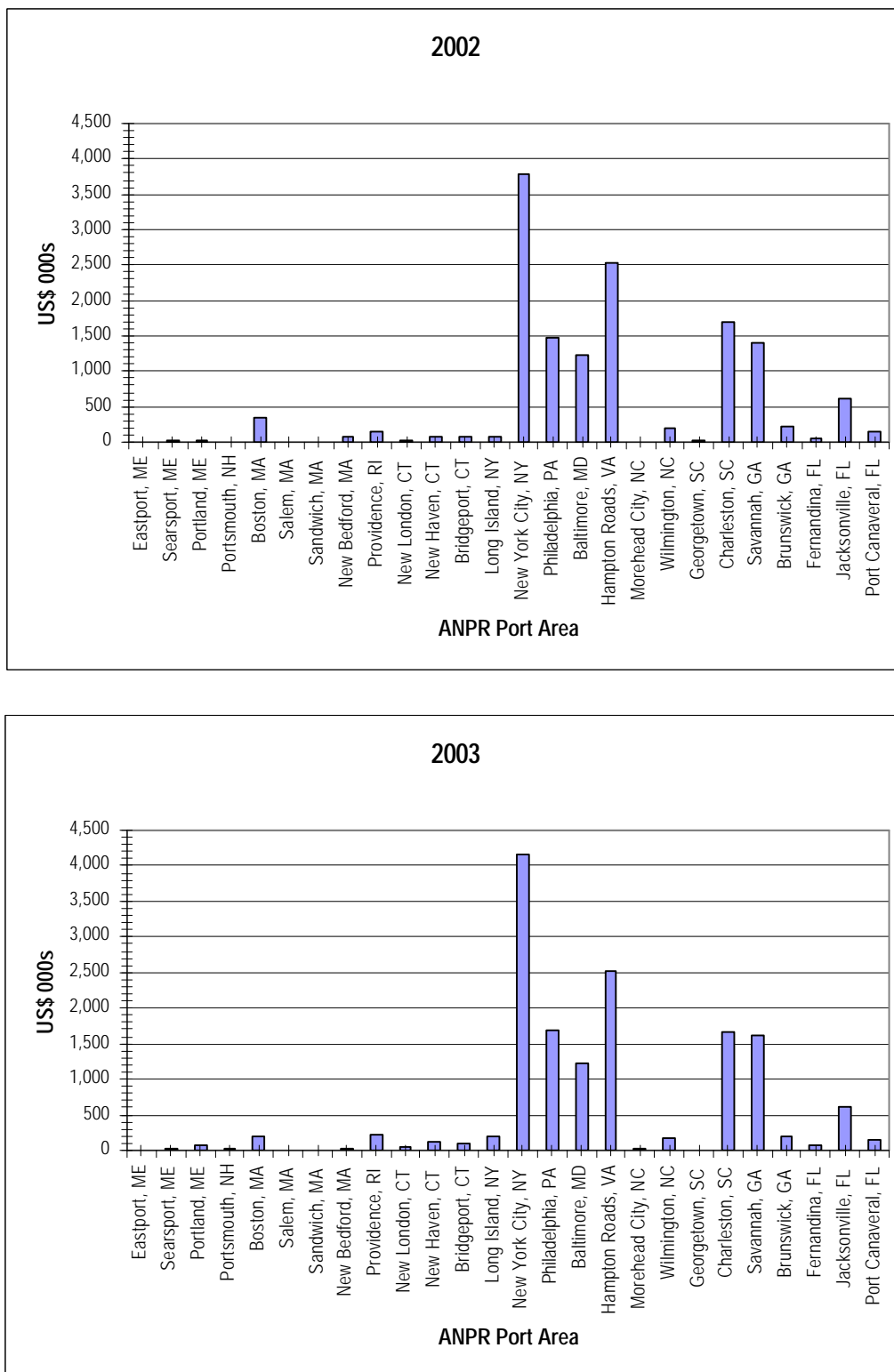
As is evident from Figure 3-18, there are only six port areas in the U.S. East Coast that will incur economic impacts of at least \$1 million annually from the implementation of the ANPR. These port areas and the estimated economic impact for 2002 are New York (\$3.8 million), Hampton Roads (\$2.5 million), Charleston (1.7 million), Philadelphia (\$1.5 million), Savannah (\$1.4 million), and Baltimore (\$1.2 million).

These six port areas are also the only port areas in 2003 to have an estimated economic impact of \$1 million in 2003. That year the rankings are the same as in 2002 except that Charleston and Philadelphia switched positions.

Table 3-18 and Table 3-19 provide the estimates of annual economic impact of the ANPR at a speed restriction of 12 knots for 2002 and 2003, respectively. The total economic impact in 2002 is estimated at \$14.3 million and in 2003 at \$15.1 million. Containerships account for 58 percent of the total economic impact each year²⁶.

²⁶ Detailed estimates of the ANPR economic impact for each vessel type by port area, and vessel DWT size range is presented in Appendix G. The same information for foreign flag vessels is presented in Appendix H.

Figure 3-18. Estimated Economic Impact of ANPR at a Speed Restriction of 12 Knots by Port Area, 2002 and 2003



Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-18. Estimated Economic Impact of ANPR at a Speed Restriction of 12 Knots by Port Area and Type of Vessel, 2002 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	0.1	-	0.7	-	0.6	-	-	-	-	-	-	-	1.4
Searsport, ME	0.0	0.0	-	-	0.0	13.0	-	-	1.4	2.7	0.0	-	17.2
Portland, ME	0.9	0.3	6.1	0.1	1.1	6.4	-	3.8	0.3	14.5	0.0	-	33.6
Portsmouth, NH	0.7	0.0	0.1	0.2	0.3	-	-	-	0.5	2.9	0.0	-	4.7
Northeastern US - Off Race Point													
Boston, MA	2.6	0.1	119.5	0.2	5.0	111.1	-	33.9	0.5	77.1	-	-	350.0
Salem, MA	2.5	-	-	-	-	-	2.0	0.3	-	0.1	-	-	4.9
Northeastern US - Cape Cod Bay	-	0.0	-	-	-	0.2	-	-	-	1.2	-	-	1.4
Mid-Atlantic Block Island Sound													
New Bedford, MA	5.5	-	-	1.1	5.8	54.4	15.3	-	-	1.1	-	-	83.3
Providence, RI	5.2	1.1	1.3	0.0	2.8	102.9	0.1	20.5	0.0	16.5	-	-	150.4
New London, CT	0.9	-	-	-	3.8	5.9	-	-	4.6	0.7	-	-	15.9
New Haven, CT	7.5	-	2.1	0.0	16.5	-	2.4	1.5	19.0	26.8	2.1	-	77.9
Bridgeport, CT	1.1	-	-	-	0.7	-	50.1	2.0	14.5	3.9	-	-	72.4
Long Island, NY	0.0	0.0	-	0.0	0.0	23.4	-	-	30.9	28.8	-	-	83.1
Mid-Atlantic Ports of New York/New Jersey	31.0	8.0	2,477.7	0.0	75.0	350.7	20.2	484.8	0.5	348.1	2.0	-	3,797.9
Mid-Atlantic Delaware Bay	45.2	10.0	351.4	7.5	116.0	33.7	406.9	98.6	5.5	398.9	4.2	-	1,477.8
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	43.3	1.5	457.7	-	118.5	56.0	11.8	497.7	0.7	44.0	2.6	-	1,233.8
Hampton Roads, VA	40.8	3.1	2,099.1	-	84.6	17.5	10.2	201.7	-	63.8	0.0	-	2,520.9
Mid-Atlantic Morehead City and Beaufort, NC	0.6	-	2.2	-	2.3	-	-	1.0	0.0	1.4	-	-	7.5
Mid-Atlantic Wilmington, NC	6.1	0.8	90.0	0.0	48.4	-	0.1	17.4	3.0	41.7	0.2	-	207.7
Mid-Atlantic Georgetown, SC	2.7	0.1	6.3	-	9.1	-	-	1.2	-	-	-	-	19.4
Mid-Atlantic Charleston, SC	14.7	0.0	1,374.4	0.3	78.5	59.9	4.0	112.8	5.7	32.6	2.2	-	1,685.1
Mid-Atlantic Savannah, GA	11.7	0.8	1,055.8	0.0	129.0	13.0	12.2	115.5	2.1	59.2	2.0	-	1,401.3
Southeastern US													
Brunswick, GA	3.5	-	15.2	-	38.6	-	7.4	145.7	-	0.7	-	-	211.0
Fernandina, FL	0.4	-	18.4	0.0	21.4	0.2	15.2	-	-	-	0.1	-	55.7
Jacksonville, FL	12.4	0.5	221.3	21.7	82.1	6.7	3.2	202.3	3.7	42.7	17.4	-	614.0
Port Canaveral, FL	0.5	0.0	0.9	0.0	2.1	127.9	2.7	0.5	0.0	1.1	0.0	-	135.9
Total	240.1	26.4	8,300.3	31.1	842.3	983.0	563.8	1,941.2	93.0	1,210.3	32.9	-	14,264.3

a/ Includes recreational vessels.

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-19. Estimated Economic Impact of ANPR at a Speed Restriction of 12 Knots by Port Area and Type of Vessel, 2003 (US\$ 000s)

ANPR Port Region and Port Area	Bulk Carriers	Combination Carriers	Container ships	Freight Barges	General Cargo Vessels	Passenger Vessels a/	Refrigerated Cargo Vessels	Ro-Ro Cargo Ship	Tank Barges	Tankers	Towing Vessels	Other b/	Total
Northeastern US - Gulf of Maine													
Eastport, ME	-	-	0.6	-	1.4	-	-	-	-	-	-	-	2.0
Searsport, ME	-	0.0	-	-	-	16.9	-	0.0	0.5	2.7	0.0	-	20.2
Portland, ME	3.2	0.7	32.9	0.0	5.6	5.5	-	13.1	0.6	18.2	0.5	-	80.4
Portsmouth, NH	0.8	0.0	8.8	-	0.7	0.1	-	1.0	0.0	3.9	0.0	-	15.4
Northeastern US - Off Race Point													
Boston, MA	1.3	0.0	71.1	0.1	1.5	43.8	2.7	6.4	-	58.6	0.1	-	185.6
Salem, MA	0.8	-	-	-	-	3.1	-	-	-	0.2	-	-	4.0
Northeastern US - Cape Cod Bay	-	-	-	-	-	0.1	-	-	-	7.2	-	-	7.3
Mid-Atlantic Block Island Sound													
New Bedford, MA	7.5	-	0.0	-	3.4	-	7.0	-	0.0	1.6	-	-	19.5
Providence, RI	6.2	0.0	0.8	-	6.6	131.6	3.5	38.9	0.0	27.4	0.4	-	215.4
New London, CT	2.1	-	0.1	-	9.4	14.3	-	-	10.1	1.4	0.0	-	37.3
New Haven, CT	7.7	0.0	0.1	0.8	17.6	12.6	-	-	36.3	48.9	1.8	-	125.8
Bridgeport, CT	7.0	-	0.0	0.0	0.3	3.3	48.1	-	27.8	8.5	-	-	95.1
Long Island, NY	-	0.0	-	0.0	-	41.8	-	-	82.3	62.5	1.0	-	187.7
Mid-Atlantic Ports of New York/New Jersey	38.8	7.6	2,660.2	0.0	22.4	450.6	22.0	504.2	5.4	434.8	3.1	-	4,149.1
Mid-Atlantic Delaware Bay	34.7	3.9	417.3	2.1	79.8	76.5	582.8	91.9	4.7	393.0	2.3	-	1,689.2
Mid-Atlantic Chesapeake Bay													
Baltimore, MD	47.4	1.4	403.9	-	91.4	68.1	6.9	539.6	1.0	65.6	1.4	-	1,226.7
Hampton Roads, VA	44.4	5.0	2,134.5	0.3	56.1	31.0	2.2	158.5	1.9	77.8	0.4	-	2,512.1
Mid-Atlantic Morehead City and Beaufort, NC	1.2	-	6.8	-	8.0	-	0.4	1.8	-	6.6	-	-	24.7
Mid-Atlantic Wilmington, NC	6.1	0.8	68.1	-	45.3	-	0.9	16.3	3.3	40.4	0.2	-	181.4
Mid-Atlantic Georgetown, SC	0.0	-	-	-	0.1	-	-	-	-	-	-	-	0.1
Mid-Atlantic Charleston, SC	11.6	0.0	1,368.4	-	55.8	71.6	2.8	113.7	4.3	40.1	2.0	-	1,670.4
Mid-Atlantic Savannah, GA	13.7	1.3	1,333.5	-	90.0	5.5	25.0	90.1	1.0	59.4	0.4	-	1,620.1
Southeastern US													
Brunswick, GA	3.1	-	21.8	-	26.8	1.9	8.8	136.8	-	1.6	-	-	200.8
Fernandina, FL	0.9	-	23.2	0.0	23.3	2.3	21.9	0.2	-	0.0	1.7	-	73.5
Jacksonville, FL	13.8	0.1	203.8	28.5	54.7	21.7	4.7	197.3	2.9	52.6	27.6	-	607.7
Port Canaveral, FL	0.6	0.0	1.1	0.0	2.7	137.2	3.1	1.5	0.1	0.7	0.2	-	147.2
Total	252.9	21.0	8,757.0	31.9	603.0	1,139.6	743.0	1,911.3	182.4	1,413.6	43.0	-	15,098.8

a/ Includes recreational vessels

b/ Includes fishing vessels, industrial vessels, research vessels, and school ships.

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

ECONOMIC IMPACT OF ANPR RELATIVE TO VALUE OF U.S. EAST COAST TRADE AND OCEAN FREIGHT COSTS

In Chapter 2, we presented data collected by the U.S. Census Bureau on volume and value of goods carried by vessels calling at U.S. East Coast ports. We also presented information on vessel import charges that represent the aggregate cost of all freight, insurance and other charges (excluding U.S. import duties) incurred in bringing the merchandise from alongside the carrier at the port of exportation and placing it alongside the carrier at the first port of entry. In this section we will compare the estimates of the economic impact of the ANPR with these indicators of the economic significance of U.S. East Coast maritime activity.

Table 3-20 presents for each port area, the significance of the estimated economic impact of the ANPR relative to the value of U.S. East Coast trade in 2002 and 2003. The economic impact is based on the base case assumptions presented in this chapter including a speed restriction of 12 knots. The value of trade merchandise is the same as reported in Chapter 2 for U.S. East Coast imports and exports by Customs District and Port. In 2002, the total annual economic impact of the ANPR is \$14.3 million while the value of U.S. East Coast trade is \$246.8 billion. Thus the economic impact represents 6 thousandth of one percent of the value of traded merchandise in 2002. In 2003, the economic impact represented only 5 thousandth of one percent of the value of traded merchandise. For all of the major port areas, the economic impact ranges from 4 to 9 thousandth of one percent of the value of merchandise trade. These results indicate that implementation of the ANPR will not have any measurable impact on the volume of merchandise traded through U.S. East Coast ports.

To measure the significance of the ANPR on the maritime sector, it is interesting to compare the estimated economic impact of the ANPR with ocean freight costs associated with U.S. East Coast trade. In Chapter 2 we determined that ocean freight charges averaged approximately five percent of the value of imports. Given the composition of our trade, it is reasonable to assume that ocean freight charges would represent no less than five percent of the value of our exports²⁷. Based on these factors, we estimate that the economic impact of the ANPR represents about one-tenth of one percent of the ocean freight costs for U.S. East Coast trade. These results indicate that the implementation of the ANPR would have an insignificant impact on the financial performance of the vessel operators calling at U.S. East Coast ports.

²⁷ U.S. East Coast exports include coal exports a relatively low value bulk commodity. If ocean freight costs account for more than 5 percent of the value of exports, then the significance of the estimated economic impact of the ANPR would be proportionately lower.

Table 3-20. Economic Impact as a Percent of Value of U.S. East Coast Maritime Trade and Ocean Freight Costs by Port Area, 2002 and 2003 (\$000s unless otherwise specified)

ANPR Port Region and Port Area	2002				2003			
	Economic Impact of ANPR	Trade Merchandise Value	Economic Impact as % of Trade Value	Economic Impact as % of Ocean Freight Cost	Economic Impact of ANPR	Trade Merchandise Value	Economic Impact as % of Trade Value	Economic Impact as % of Ocean Freight Cost
Northeastern US - Gulf of Maine								
Eastport, ME	1.4	103,400	0.001%	0.027%	2.0	133,271	0.001%	0.029%
Searspoint, ME	17.2	221,204	0.008%	0.155%	20.2	300,977	0.007%	0.134%
Portland, ME	33.6	794,881	0.004%	0.085%	80.4	1,015,443	0.008%	0.158%
Portsmouth, NH	4.7	480,471	0.001%	0.020%	15.4	651,464	0.002%	0.047%
Northeastern US - Off Race Point								
Boston, MA	350.0	5,907,663	0.006%	0.118%	185.6	5,925,270	0.003%	0.063%
Salem, MA	4.9	36,894	0.013%	0.267%	4.0	38,787	0.010%	0.209%
Northeastern US - Cape Cod Bay	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.
Mid-Atlantic Block Island Sound								
New Bedford, MA	83.3	94,674	0.088%	1.760%	19.5	143,822	0.014%	0.272%
Providence, RI	150.4	1,058,988	0.014%	0.284%	215.4	2,726,500	0.008%	0.158%
New London, CT	15.9	133,059	0.012%	0.239%	37.3	160,856	0.023%	0.464%
New Haven, CT	77.9	978,141	0.008%	0.159%	125.8	996,882	0.013%	0.252%
Bridgeport, CT	72.4	145,052	0.050%	0.998%	95.1	148,028	0.064%	1.285%
Long Island, NY	83.1	n.a.	n.a.		187.7	n.a.	n.a.	n.a.
Mid-Atlantic Ports of New York/New Jersey	3,797.9	89,811,854	0.004%	0.085%	4,149.1	100,361,017	0.004%	0.083%
Mid-Atlantic Delaware Bay	1,477.8	21,169,348	0.007%	0.140%	1,689.2	23,898,477	0.007%	0.141%
Mid-Atlantic Chesapeake Bay								
Baltimore, MD	1,233.8	22,884,837	0.005%	0.108%	1,226.7	26,165,227	0.005%	0.094%
Hampton Roads, VA	2,520.9	29,384,172	0.009%	0.172%	2,512.1	33,130,894	0.008%	0.152%
Mid-Atlantic Morehead City and Beaufort, NC	7.5	481,283	0.002%	0.031%	24.7	586,395	0.004%	0.084%
Mid-Atlantic Wilmington, NC	207.7	2,294,936	0.009%	0.181%	181.4	2,203,949	0.008%	0.165%
Mid-Atlantic Georgetown, SC	19.4	85,475	0.023%	0.454%	0.1	61,326	0.000%	0.005%
Mid-Atlantic Charleston, SC	1,685.1	33,531,934	0.005%	0.101%	1,670.4	39,546,658	0.004%	0.084%
Mid-Atlantic Savannah, GA	1,401.3	19,767,457	0.007%	0.142%	1,620.1	21,264,835	0.008%	0.152%
Southeastern US								
Brunswick, GA	211.0	4,858,691	0.004%	0.087%	200.8	5,337,054	0.004%	0.075%
Fernandina, FL	55.7	284,575	0.020%	0.392%	73.5	273,979	0.027%	0.537%
Jacksonville, FL	614.0	11,935,349	0.005%	0.103%	607.7	12,359,740	0.005%	0.098%
Port Canaveral, FL	135.9	482,212	0.028%	0.564%	147.2	483,184	0.030%	0.609%
Total	14,264.3	246,823,193	0.006%	0.116%	15,098.8	277,914,145	0.005%	0.109%

Source: Prepared by Nathan Associates from U.S Census Bureau Foreign Trade Statistics for 2002 and 2003 and analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

SENSITIVITY ANALYSIS

The ANPR states that the proposed speed restrictions would likely be in the range of 10-14 knots. For this study, we have used 12 knots as the base case assumption. However in this sensitivity analysis we identify the economic impact of alternative speed restrictions of 10, 11, 13, and 14 knots. Similarly, the ANPR stated that the speed restrictions would be in effect for a distance generally between 20-30 nautical miles from the shoreline. For this study, we have used the maximum stated distance as the base case assumption. In the sensitivity analysis we identify the potential economic impact of the ANPR using the minimum stated distance²⁸.

Table 3-21 presents the results of the sensitivity analysis by port area. A lowering of the speed restriction from 12 knots to 10 knots would result in a 61 percent increase in the estimated economic impact of the ANPR. For 2002, the total economic impact at a speed restriction of 10 knots is estimated at \$23.0 million compared to \$14.3 million at 12 knots. In 2003, the economic impact is estimated at \$24.4 million at 10 knots.

Table 3-22 displays the sensitivity analysis results for each port area using the economic impact of the base case scenario (speed restriction of 12 knots) as an index. It is evident that changes in ANPR economic impact due to alternative speed restrictions are not uniformly incurred by all port areas. For example, an alternative speed restriction of 10 knots would increase the estimated economic impact of the ANPR for the port area of Portsmouth by 135 percent in 2002 whereas for the port area of Charleston, the increase in economic impact would only be 50 percent.

In Portsmouth, the 10 knot speed restriction introduces an economic impact for the smaller and slower bulk carriers, combination carriers and general cargo vessels that were not affected by a 12 knot speed restriction. For Charleston, the minimal if any traffic of these vessels types and sizes are outweighed by the containership traffic.

For the U.S. East Coast as a whole, a speed restriction of 11 knots would increase the ANPR economic impact by 28 percent each year. Conversely, a speed restriction of 13 knots would decrease the ANPR economic impact by 23 percent. If the speed restriction were set at 14 knots, the ANPR economic impact would be reduced by 42 percent.

Table 3-21 and Table 3-22 also show the estimated economic impact if the minimum effective distances are assumed along with a speed restriction of 12 knots. For the U.S. East Coast, this would result in a lowering of the estimated ANPR economic impact by 9 percent each year. However, for some port areas, there is no difference in the maximum and minimum effective distance and hence the results are the same as the base case. For those port areas with a range of distances, the use of the minimum distance generally lowers the estimated economic impact by 30-35 percent, roughly proportional to the reduction in effective distance.

²⁸ The maximum and minimum effective distance assumed for each port area is presented in Table 3-6.

Table 3-21. Economic Impact of ANPR at Alternative Speed Restrictions of 10-14 Knots and with Minimum Effective Distance by Port Area, 2002 and 2003 (\$000s)

ANPR Port Region and Port Area	2002						2003					
	Restriction speed in knots					12 knots & minimum effective distance	Restriction speed in knots					12 knots & minimum effective distance
	10	11	12	13	14		10	11	12	13	14	
Northeastern US - Gulf of Maine												
Eastport, ME	2.6	2.0	1.4	1.1	0.8	1.4	3.1	2.5	2.0	1.5	1.1	2.0
Searsport, ME	31.4	23.6	17.2	11.8	7.4	17.2	34.9	26.8	20.2	14.5	9.8	20.2
Portland, ME	64.3	47.6	33.6	22.3	13.4	33.6	144.2	109.4	80.4	56.9	39.4	80.4
Portsmouth, NH	11.1	7.6	4.7	2.3	0.6	4.7	27.3	20.8	15.4	10.9	7.7	15.4
Northeastern US - Off Race Point												
Boston, MA	610.4	468.4	350.0	252.5	173.9	350.0	333.3	252.7	185.6	130.1	85.4	185.6
Salem, MA	11.3	7.8	4.9	2.5	1.1	4.9	8.1	5.9	4.0	2.5	1.4	4.0
Northeastern US - Cape Cod Bay	2.9	2.1	1.4	0.8	0.3	0.9	15.4	11.0	7.3	4.2	1.5	4.1
Mid-Atlantic Block Island Sound												
New Bedford, MA	155.1	116.0	83.3	56.9	37.6	56.8	45.8	31.5	19.5	9.9	4.0	13.4
Providence, RI	276.4	207.7	150.4	104.0	68.9	102.4	382.6	291.3	215.4	152.6	103.7	146.5
New London, CT	32.6	23.5	15.9	9.6	5.4	11.0	78.8	56.2	37.3	21.7	12.0	26.1
New Haven, CT	179.4	124.0	77.9	40.4	15.7	53.8	293.6	202.0	125.8	63.0	21.4	86.3
Bridgeport, CT	138.6	102.5	72.4	46.9	28.3	49.8	200.4	143.0	95.1	55.0	28.4	65.5
Long Island, NY	187.3	130.4	83.1	43.1	15.8	57.6	444.0	304.2	187.7	89.4	29.4	128.8
Mid-Atlantic Ports of New York/New Jersey	5,963.5	4,781.9	3,797.9	2,972.9	2,288.2	3,797.9	6,520.2	5,226.6	4,149.1	3,244.0	2,495.4	4,149.1
Mid-Atlantic Delaware Bay	2,716.1	2,039.7	1,477.8	1,018.3	659.8	978.3	2,996.9	2,282.9	1,689.2	1,198.3	804.9	1,117.2
Mid-Atlantic Chesapeake Bay												
Baltimore, MD	1,986.2	1,575.0	1,233.8	954.6	724.4	1,233.8	1,996.4	1,576.0	1,226.7	939.3	704.6	1,226.7
Hampton Roads, VA	3,795.6	3,099.3	2,520.9	2,039.3	1,639.2	2,520.9	3,786.7	3,090.7	2,512.1	2,029.6	1,626.8	2,512.1
Mid-Atlantic Morehead City and Beaufort, NC	15.7	11.2	7.5	4.9	3.1	5.8	50.0	36.1	24.7	16.2	10.0	18.9
Mid-Atlantic Wilmington, NC	373.0	282.5	207.7	148.8	104.2	207.7	328.0	247.7	181.4	128.1	87.1	181.4
Mid-Atlantic Georgetown, SC	38.5	27.9	19.4	13.8	10.2	12.4	0.3	0.2	0.1	0.1	0.1	0.1
Mid-Atlantic Charleston, SC	2,526.5	2,067.5	1,685.1	1,364.6	1,096.6	1,098.9	2,503.6	2,048.9	1,670.4	1,353.4	1,088.1	1,086.1
Mid-Atlantic Savannah, GA	2,154.3	1,742.8	1,401.3	1,120.5	891.2	1,401.3	2,459.4	2,000.9	1,620.1	1,306.3	1,049.5	1,620.1
Southeastern US												
Brunswick, GA	347.6	272.5	211.0	162.1	122.1	211.0	330.2	259.0	200.8	154.3	116.0	200.8
Fernandina, FL	106.7	78.9	55.7	38.7	26.2	55.7	132.8	100.4	73.5	52.3	35.5	73.5
Jacksonville, FL	1,076.3	824.1	614.0	444.2	315.4	614.0	1,088.0	826.0	607.7	429.1	299.5	607.7
Port Canaveral, FL	211.5	170.2	135.9	107.4	83.4	135.9	233.1	186.2	147.2	114.7	87.4	147.2
Total	23,015.1	18,236.4	14,264.3	10,984.2	8,333.3	13,017.7	24,437.0	19,339.2	15,098.8	11,578.0	8,750.1	13,719.3

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table 3-22. Economic Impact of ANPR at Alternative Speed Restrictions and with Minimum Effective Distance by Port Area, 2002 and 2003 (Indexed 12 knots = 100)

ANPR Port Region and Port Area	2002						2003					
	Restriction speed in knots					12 knots & minimum effective distance	Restriction speed in knots					12 knots & minimum effective distance
	10	11	12	13	14		10	11	12	13	14	
Northeastern US - Gulf of Maine												
Eastport, ME	186.7	139.4	100.0	74.7	57.3	100.0	159.9	127.2	100.0	77.0	57.2	100.0
Searsport, ME	183.0	137.6	100.0	68.7	43.2	100.0	172.9	133.1	100.0	72.0	48.6	100.0
Portland, ME	191.2	141.4	100.0	66.2	39.8	100.0	179.4	136.1	100.0	70.7	49.0	100.0
Portsmouth, NH	235.2	161.5	100.0	48.6	12.9	100.0	176.9	135.0	100.0	70.9	49.7	100.0
Northeastern US - Off Race Point												
Boston, MA	174.4	133.8	100.0	72.1	49.7	100.0	179.6	136.2	100.0	70.1	46.0	100.0
Salem, MA	229.3	158.8	100.0	50.3	21.4	100.0	201.3	146.1	100.0	61.0	34.1	100.0
Northeastern US - Cape Cod Bay	205.3	147.9	100.0	59.5	24.8	62.5	211.5	150.7	100.0	57.1	20.4	56.4
Mid-Atlantic Block Island Sound												
New Bedford, MA	186.1	139.1	100.0	68.3	45.1	68.1	234.7	161.2	100.0	50.8	20.6	68.7
Providence, RI	183.8	138.1	100.0	69.2	45.8	68.1	177.7	135.3	100.0	70.9	48.1	68.0
New London, CT	205.3	147.8	100.0	60.7	34.0	69.0	211.3	150.6	100.0	58.2	32.1	69.9
New Haven, CT	230.3	159.2	100.0	51.9	20.2	69.1	233.4	160.6	100.0	50.1	17.0	68.6
Bridgeport, CT	191.6	141.6	100.0	64.8	39.1	68.7	210.7	150.3	100.0	57.8	29.8	68.9
Long Island, NY	225.5	157.1	100.0	51.9	19.1	69.4	236.5	162.0	100.0	47.6	15.6	68.6
Mid-Atlantic Ports of New York/New Jersey	157.0	125.9	100.0	78.3	60.2	100.0	157.1	126.0	100.0	78.2	60.1	100.0
Mid-Atlantic Delaware Bay	183.8	138.0	100.0	68.9	44.6	66.2	177.4	135.1	100.0	70.9	47.6	66.1
Mid-Atlantic Chesapeake Bay												
Baltimore, MD	161.0	127.7	100.0	77.4	58.7	100.0	162.7	128.5	100.0	76.6	57.4	100.0
Hampton Roads, VA	150.6	122.9	100.0	80.9	65.0	100.0	150.7	123.0	100.0	80.8	64.8	100.0
Mid-Atlantic Morehead City and Beaufort, NC	208.8	148.5	100.0	65.6	41.4	77.4	202.7	146.4	100.0	65.7	40.6	76.6
Mid-Atlantic Wilmington, NC	179.6	136.0	100.0	71.6	50.2	100.0	180.8	136.6	100.0	70.6	48.0	100.0
Mid-Atlantic Georgetown, SC	198.3	143.9	100.0	71.2	52.3	64.0	180.2	136.4	100.0	73.3	54.5	100.0
Mid-Atlantic Charleston, SC	149.9	122.7	100.0	81.0	65.1	65.2	149.9	122.7	100.0	81.0	65.1	65.0
Mid-Atlantic Savannah, GA	153.7	124.4	100.0	80.0	63.6	100.0	151.8	123.5	100.0	80.6	64.8	100.0
Southeastern US												
Brunswick, GA	164.7	129.1	100.0	76.8	57.9	100.0	164.5	129.0	100.0	76.9	57.8	100.0
Fernandina, FL	191.5	141.6	100.0	69.4	47.1	100.0	180.6	136.6	100.0	71.1	48.4	100.0
Jacksonville, FL	175.3	134.2	100.0	72.3	51.4	100.0	179.0	135.9	100.0	70.6	49.3	100.0
Port Canaveral, FL	155.7	125.3	100.0	79.1	61.4	100.0	158.3	126.5	100.0	77.9	59.4	100.0
Total	161.3	127.8	100.0	77.0	58.4	91.3	161.8	128.1	100.0	76.7	58.0	90.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Potential Economic Impact on Other Market Segments

As described earlier, the estimates of ANPR economic impact by port area and vessel type are based on U.S. Coast Guard data on the arrival of vessel 150 GRT or greater at U.S. East Coast ports. The USCG data captures the vast preponderance commercial maritime activity that would be subject to the ANPR speed restrictions. However, there are some market segments that may be impacted by the ANPR whose maritime activities are not adequately captured in the USCG data. In this section, we identify the most relevant of these market segments and discuss the potential economic impact of the ANPR speed restrictions.

COASTWISE SHIPPING

Coastwise shipping or cabotage trade along the U.S. East Coast has always been an important segment of our nation's maritime heritage. In recent years, attention has been focused on the further development of coastwise shipping (also referred to as short-sea shipping) as a means of reducing highway congestion on the Eastern Seaboard. Benefits of coastwise shipping also include lowering transport and environmental costs and reducing our demand for imported fuel. For these reasons, it is important that the ANPR speed restrictions not unduly affect the development of increased coastwise shipping.

However, for commercial and navigation purposes, it appears unlikely that the ANPR speed restriction would significantly affect coast wise shipping. Northbound vessels prefer to use Gulf Stream further offshore and benefit from the enhanced operating speed and fuel efficiency. Southbound traffic routes closer to the U.S. East Coast; generally within 7-10 nautical miles of the shoreline. However, during the proposed seasonal management periods, masters of southbound vessels would likely route outside of seasonal speed restricted areas incurring a minimal overall increase in distance.

Vessels that operate in coastwise shipping that have multiple stops along the U.S. East Coast are included in the U.S. Coast Guard vessels arrivals data and the potential impact of the ANPR has been included in the estimates already presented. Also at the beginning and end of their U.S. East Coast string, Southbound vessels will route on the most direct course from their port of origin or next destination and thus would not be sailing close to the coast. Thus the additional potential economic impact due to coastwise shipping corresponds to Southbound vessels having to route further off-shore to bypass intermediate seasonal speed restricted areas between U.S. East Coast port calls.

Containerships are the vessel type that would be most affected by speed restrictions at intermediate seasonal speed restricted areas. In 2002, there were 3,916 containership restricted period vessel calls at U.S. East Coast ports. Assuming half of these calls were in the Southbound direction and that the typical containership made vessel calls at three U.S. East Coast ports per service, there would be about 650 Southbound containerships

services that would need to route around at least one intermediate seasonal speed restricted areas. Based on an increase in routing of 35 nautical miles²⁹ and an average operating speed of 20 knots, the containership would have increased sailing time of 1.75 hours. Using an average hourly operating cost at sea of \$1,000, the estimated economic impact for each Southbound containership would be \$1,750. For 2002, the additional economic impact for containerships for coastwise shipping is estimated at \$1.1 million. In 2003, the same assumptions result in an estimated economic impact of \$1.2 million.

COMMERCIAL FISHING

Commercial fishing is a multimillion dollar industry along the U.S. East Coast. In 2002, commercial fish landings at U.S. East Coast ports totaled \$625 million (Table 3-23). The port of New Bedford, MA is the leading U.S. port in terms of value of commercial fish landings with 168.2 million in 2002 and 176.2 million in 2003.

Table 3-23. U.S. East Coast Commercial Fishery Landings by Port 2002 and 2003 (millions of dollars)

Port	2002	2003
New Bedford, MA	168.6	176.2
Hampton Roads, VA	69.5	79.6
Cape May-Wildwood, NJ	35.3	42.8
Gloucetser, MA	41.2	37.8
Point Judith, RI	31.3	32.4
Portland, ME	40.4	28.7
Reedville, VA	24.2	24.2
Point Pleasant, NJ	19.7	22.8
Wanchese-Stumpy Point, NC	23.2	21.0
Atlantic City, NJ	22.4	20.8
Stonington, ME	21.7	20.5
Beaufort- Morehead City, NC	19.1	15.0
Provincetown-Chatham, MA	15.2	13.5
Charleston -Mt. Pleasant, SC	9.3	13.0
Montauk, NY	11.1	11.0
Boston, MA	8.6	8.9
Engelhard-Swanquarter, NC	11.1	8.0
Beaufort, SC	n.a.	7.0
Cape Canveral, FL	6.2	6.8
Ocean City, MD	8.1	6.6
Hampton Bay-Shinnecock, NY	8.3	6.5
Georgetown, SC	5.2	6.0
Belhaven- Washington, NC	6.2	5.0
Oriental-Vandemere, NC	8.5	5.0
Sneads Ferry-Swansboro, NC	6.4	5.0
Rockland, ME	4.3	4.1
Total	625.1	628.2

Source: NOAA Fisheries.

²⁹ The containerships are assumed to sail at a distance of 30 nautical miles offshore instead of 8 nautical miles. Based on a diagonal routing to the further offshore sailing route at both ends, a total of 35 additional nautical miles is assumed.

The ANPR applies to vessels with a length of 65 feet and above. Our analysis of commercial fishing permits issued on the U.S. East Coast shows that the vast majority of commercial fishing vessels that are 65 feet and above have a GRT of less than 150 tons and hence are not captured in the U.S. Coast Guard vessel arrival database. Table 3-24 shows that for the Southeast region approximately 84 percent of the fishing vessels over 65 feet are less than 150 tons. For the Northeast region, nearly 67 percent of the fishing vessels over 65 feet are less than 150 tons.

Table 3-24. Fishing Vessel Permits Issued to Vessels 65 Feet and Above in LOA by Region, 2003

Vessel gross registered tons	Southeast Region				Northeast Region	
	Fishing permits	%	Unique vessels	%	Fishing permits	%
All vessels	557	100.0%	347	100.0%	856	100.0%
Vessels less than 150 GRT	482	86.5%	290	83.6%	572	66.8%
Vessels 150 GRT and above	75	13.5%	57	16.4%	284	33.2%

Note: For the Northeast Region fishing permit data provided was for unique vessels only.

Source: Prepared by Nathan Associates Inc. from data provided by National Marine Fisheries Service, Sustainable Fisheries Division, Southeast Fisheries Science Center and NOAA Fisheries, Northeast Fisheries Science Center.

The estimated economic impact of the ANPR on commercial fishing vessels in 2003 is presented in Table 3-25. The analysis is based on the fishing permits issued in the Northeast and Southeast regions to vessels over 65 feet of LOA and under 150 GRT. The analysis assumes that the commercial fishing vessels are affected for an effective distance of 30 nautical miles each way as they steam to/ from fishing areas.

Many commercial fishing vessels steam at 10 knots or below and will not be affected by the ANPR. Also the typical steaming speed for other commercial fishing vessels is assumed at 12 knots. Based on these assumptions, the commercial fishing vessels will not be affected by alternative speed restrictions of 12 knots or higher. However, these vessels will be impacted by the proposed alternative speed restrictions of 10 or 11 knots.

Table 3-25. Estimated Economic Impact of Proposed ANPR on Commercial Fishing Vessels by Region, 2003

Item	Northeast Region	Southeast Region
Commercial fishing permits for vessel over 65 ft LOA and under 150 GRT	572	290
Percent with steaming speed over 10 knots	40%	40%
Vessels potentially affected by ANPR	229	116
Typical steaming speed of affected vessels (knots)	12	12
Number of trips per year per vessel	20	20
Minutes of delay per trip with restricted speed of		
12 knots	-	-
11 knots	27.3	27.3
10 knots	60.0	60.0
Operating cost per hour of steaming (dollars)	150	150
Estimated impact per year with restricted speed (dollars)		
12 knots	-	-
11 knots	312,000	158,182
10 knots	686,400	348,000

Source: Prepared by Nathan Associates Inc.

With a speed restriction of 11 knots, the estimated impact in 2003 on commercial fishing vessels is estimated at \$312 thousand for the Northeast Region and \$158 thousand for the Southeast Region. The combined Northeast and Southeast regional economic impact of \$470 thousand represents eight-hundredths of one percent of the U.S. East Coast commercial fishery landings of \$628.2 million in 2003.

With a speed restriction of 10 knots, the estimated combined Northeast and Southeast regional economic impact in 2003 increases to slightly more than \$1 million or approximately two-tenths of one percent of the U.S. East Coast commercial fishery landings.

These results indicate that the implementation of the ANPR will not have an undue adverse impact on the commercial fishing industry along the U.S. East Coast.

CHARTER FISHING

During the stakeholder meetings, concerns were raised by representatives of the charter fishing industry regarding the negative effects of the ANPR speed restrictions on the industry. In some areas, charter vessels travel up to 50 nautical miles offshore to reach prime fishing areas. At vessel speeds of up to 17 knots they can reach their fishing areas in less than 3 hours. A speed restriction of 12 knots for 30 nautical miles would add about 90 minutes to the roundtrip steaming time, and could severely affect client demand.

The charter fishing industry is active along the U.S. East Coast with concentration in the Carolinas, Virginia, Florida, New Jersey and Massachusetts. The industry consists of half-day charters of about 6 hours that

typically go up to 20 nautical miles offshore; full-day charters of 11-12 hours that can go up to 40 nautical miles offshore; and extended full day charters that can be from 18-24 hours and go up to 50 miles offshore. The vast majority of the charter fishing industry consists of modern and well-equipped fishing boats of less than 65 feet LOA and thus would not be subject to the ANPR.

A small segment of the industry referred to as headboats often uses vessels of 80 feet LOA and above that can accommodate 60 to 100 passengers. These vessels go up to 50 miles offshore stop and anchor over wreck and rock formations for fishing species as red snapper, grouper, trigger fish, amberjack. The charter fee for a headboat is typically \$50- \$80 per person.

As described above an increase of 1.5 hours roundtrip steaming time would reduce the competitiveness of the larger headboats (more than 65 foot LOA) particularly for the half-day and full-day charters. It is expected that vessels of less than 65 foot LOA would increase their share of those market segments. For extended full-day charters, headboats of LOA in excess of 65 feet would incur additional costs associated with the 1.5 hour increase in roundtrip steaming time. It is estimated that annual economic impact of a speed restriction of 12 knots for these vessels would be approximately \$720 thousand³⁰.

Estimated Secondary Economic Impact

Depending on the nature and significance of the direct economic impact of the ANPR on maritime operations, it is possible that the ANPR could have secondary economic impacts. Potential secondary economic impacts were raised by port authorities, shipping industry representatives, and community leaders during the public stakeholder meetings. Potential secondary economic impacts include:

- Diversion of traffic to other ports
- Increased intermodal costs due to missed rail and truck connections
- Impact on local economies of decreased income from commercial fishing, charter fishing, and whale watching

There are many factors that influence a shipping lines decision to call at specific ports. These include the adequacy and suitability of port facilities and equipment, the ability of the terminal operator to quickly turnaround the vessel, overall cargo demand, efficiency of intermodal transportation, port charges, and the port location relative to other ports and cargo markets.

At the stakeholders meeting in Boston, there was particular concern raised over the possibility of traffic diverting to other ports such as Halifax. There are several reasons why we believe it highly unlikely that the

³⁰ This calculation assumes 40 headboat vessels with 60 roundtrips per year and an hourly steaming operating cost of \$200. For alternative speed restrictions of 10 and 11 knots, the estimated impact would be \$1.2 million and \$ 924 thousand, respectively.

implementation of the ANPR will result in the diversion of any traffic. First, seasonal speed restrictions in the port area of Boston are proposed for only 45 days per year (April 1- May 15). Secondly, due to interport competition, much of the cargo that currently calls at the port area of Boston is destined for its New England and northern New York hinterland. The additional land transportation costs to be shipped from Halifax to interior New England destinations would rule out the possibility of any traffic diversion.

The economic impact analysis showed that the economic impact per vessel arrival was greater for the larger vessels. This is because the value of time of these vessels is more costly due to the capital cost of the vessels and also because they operate at higher speeds. However, due to economies of scale, these vessels are designed to carry proportionate greater amounts of cargo than smaller vessels. Hence the economic impact of the ANPR on a cost per ton of cargo may be lower for a larger vessel than for smaller vessels.

For example, assume that 4,000 TEU containership (55,000 DWT) calling at the port area of Boston during the seasonal speed restrictions incurs a delay of 59 minutes (Appendix Table F-3). The hourly operating cost of this vessel is \$1,671 resulting in an increased cost of \$1,643. On a per TEU basis this equals 41 cents per TEU. Assuming 10 tons per TEU, the economic impact would be 4.1 cents per ton of cargo.

If a 2,800 TEU containership (39,000 DWT) were to call at the port area of Boston at the same period, it would incur a delay of 54.3 minutes. At an hourly operating cost of \$1,329 this would result in an increased cost of \$1,203. On a per TEU basis this equals 43 cents per TEU or 4.3 cents per ton of cargo.

For most vessel types, the average delay is per vessel arrival is under 30 minutes. Further as the seasonal speed restrictions would be known in advance, vessel operators and port authorities will be able to schedule vessel arrivals taking into account the periods of speed restrictions. Thus it is unlikely that intermodal connections would be missed due to the implementation of the ANPR. Even during dynamic area management periods, the brief delays will be known well in advance of the vessel arrival and the schedule can be set accordingly.

Findings and Conclusions

In this section we summarize the findings and conclusions regarding the economic impact of the ANPR on U.S. East Coast maritime activity.

- The estimated total economic impact of the ANPR with a speed restriction of 12 knots is \$16.1 million in 2002 and \$17.0 million in 2003 (Table 3-26). The speed restrictions for seasonal management areas accounts for 77 percent of the total estimated economic impact in 2002. Other categories of economic impact include dynamic area management (12 percent), coastwise shipping (7 percent) and charter fishing (4 percent).

Table 3-26. Estimated Economic Impact of Proposed ANPR with Speed Restriction of 12 Knots by Category of Impact, 2002 and 2003 (US\$ 000s)

Impact category	2002	2003
Vessels over 150 GRT		
Seasonal Management Areas	12,404.9	13,264.5
Dynamic Area Management	1,859.3	1,834.2
Subtotal	14,264.2	15,098.7
Coastwise shipping	1,142.2	1,165.8
Commerical Fishing	-	-
Charter Fishing	720.0	720.0
Total economic impact	16,126.4	16,984.5

Source: Prepared by Nathan Associates as described in text.

- The overall average delay for all vessels in 2002 is 31 minute per arrival. The longest average delay is experienced at the port area of Hampton Roads with an average delay of 52 minutes per arrival. This is due to the predominance of large and fast containerships at the port area coupled with the relatively few arrivals of smaller and slower vessel types. The port areas of Baltimore (39 minutes) and New York (36 minutes) are the only other port areas with average delays in excess of 30 minutes.
- For the U.S. East Coast, the average increase in restricted period vessel operating costs is \$1,230 per vessel call.
- There are only six port areas in the U.S. East Coast that will incur economic impacts of at least \$1 million annually from the implementation of the ANPR. These port areas and the estimated economic impact for 2002 are New York (\$3.8 million), Hampton Roads (\$2.5 million), Charleston (1.7 million), Philadelphia (\$1.5 million), Savannah (\$1.4 million), and Baltimore (\$1.2 million). These six port areas account for 88 percent of the estimated direct economic impact of the seasonal speed restrictions in 2002 and 87 percent in 2003. Of all remaining 20 U.S. East Coast port areas, only Jacksonville (\$524 thousand in 2002 and \$522 thousand in 2003) has a direct economic impact greater than \$200 thousand per year.
- Foreign flag vessels account for approximately 90 percent of the total direct economic impact each year. Thus, in 2002 the economic impact incurred by foreign vessels is \$11.2 million and in 2003, \$12.0 million
- In 2002, the total economic impact due to DMA implementations is estimated at \$1.9 million while in 2003 it is estimated at \$1.8 million. More than 50 percent of the economic impact is incurred by containerships with roughly \$1.0 million each year. Passenger vessels account for 16 percent of the DMA implementation economic followed by Ro-Ro cargo ships with 12 percent of the total.

- For 2002, the additional economic impact for containerships for having to route around intermediate seasonal speed restricted areas on coastwise shipping routes is estimated at \$1.1 million. In 2003, the same assumptions result in an estimated economic impact of \$1.2 million.
- Many commercial fishing vessels steam at 10 knots or below and will not be affected by the ANPR. Also the typical steaming speed for other commercial fishing vessels is assumed at 12 knots. Based on these assumptions, the commercial fishing vessels will not be affected by alternative speed restrictions of 12 knots or higher.
- The vast majority of the charter fishing industry consists of modern and well-equipped fishing boats of less than 65 feet LOA and would not be subject to the ANPR. For extended full-day charters, headboats of LOA in excess of 65 feet would incur additional costs associated with the 1.5 hour increase in roundtrip steaming time. It is estimated that annual economic impact of a speed restriction of 12 knots for these vessels would be approximately \$720 thousand.
- It is unlikely that intermodal connections would be missed due to the implementation of the ANPR. For most vessel types, the average delay is per vessel arrival is under 30 minutes. Further as the seasonal speed restrictions would be known in advance, vessel operators and port authorities will be able to schedule vessel arrivals taking into account the periods of speed restrictions. Even during dynamic area management periods, the brief delays will be known well in advance of the vessel arrival and the schedule can be set accordingly.
- In 2002, the total annual economic impact of the ANPR is \$14.3 million while the value of U.S. East Coast trade is \$246.8 billion. Thus the economic impact represents 6 thousandth of one percent of the value of traded merchandise in 2002. In 2003, the economic impact represented only 5 thousandth of one percent of the value of traded merchandise. These results indicate that implementation of the ANPR will not have any measurable impact on the volume of merchandise traded through U.S. East Coast ports.
- The economic impact of the ANPR represents about one-tenth of one percent of the ocean freight costs for U.S. East Coast trade. These results indicate that the implementation of the ANPR would have not have a significant adverse impact on the financial performance of the vessel operators calling at U.S. East Coast ports.

Appendix A

DESCRIPTION AND REVIEW
OF U.S. COAST GUARD
VESSEL ARRIVAL DATA

Appendix A, Attachment 1. U.S. Coast Guard Data Fields on Vessel Arrivals, Vessel Characteristics and Ports

1. Vessel Arrivals File

Column No.	Type	Column Name	Length
1	char	Arrival-Id	10
2	char	Vessel Id	10
3	char	Arrival_DtTm	10
4	char	Departure DtTm	10
5	char	Arrival Status Type Id	5
6	char	AOR_Id	10
7	varchar	Port Abrv	50
8	char	Last AOR Id	10
9	varchar	Last_ Port Abrv	20
10	char	Next AOR Id	10
11	varchar	Next_ Port Abrv	20
12	char	Product Type Id	3
13	char	Cargo Amount	10
14	char	Cargo Unit Type Id	3
15	char	Low_ Value_ Bulk_Ind	1
16	varchar	Location_Desc	150
17	char	Contact _Party_Id	10
18	varchar	Contact_ Name	30
19	char	Contact_ Phone Num	12
20	char	Class Soc_Party_Id	10
21	char	Targeted Party_Id	10
22	char	Targeting Matrix Pts	10
23	char	Calc_Priority_Lvl	5
24	bit	Preliminary_Priority_Ind	1
25	char	Assigned Priority_Lvl	5
26	varchar	Assigned Priorit	
27	varchar	Comments	255
28	char	Inspection Activity_Id	10
29	char	Last-Mod DtTm	10
30	char	Last Mod Activity_Id	10
31	char	Last-Mod-Unit-Id	10
32	text	General Cargo Desc	16
33	varchar	Anchorage	150
34	varchar	Place.Of.Docking	150
35	varchar	Other_Port_Desc	150
36	char	SANS_ Id	10
37	char	AMVER_Id	10

38 char	Ext_Last_Mod_DtTm	10
39 varchar	Docking_Desc	100
40 varchar	Anchorage_Desc	100
41 char	Voy_Num	10
42 varchar	Sans_Comments	250
43 varchar	Sans_Discrepancies	250
44 varchar	Sans_Cargo_Desc	250
45 char	Sans-Port-Id	10
46 varchar	Charterer	100
47 char	Boarding_Activity_Id	10
48 varchar	sp - filler	1

2. Arrival Ports File

Column No.	Type	Column Name	Length
1	char	Port-Id	10
2	varchar	Port_Abbr	20
3	varchar	Port_Desc	200
4	char	Country_Code_Id	5
5	char	State_Abbr	2
6	varchar	City_Name	50
7	char	Location-Id	10
8	char	AMVER_Port_Ind	1
9	char	Active-Ind	1
10	char	Last_Mod_DtTm	10
11	char	Last-Mod-Unit-Id	10
12	varchar	Last.Mod.User	30
13	varchar	sp - filler	1

3. Vessel Characteristics File

Column No.	Type	Column Name	Length
1	char	gk d vessel	28
2	char	vessel_ id	15
3	varchar	vessel.name	33
4	char	managing_owner_id	28
5	varchar	managing_ owner	120
6	varchar	gross ton	8
7	varchar	net_ ton	8
8	varchar	length	7
9	varchar	breadth	7
10	varchar	depth	7
11	varchar	itc breadth	7
12	varchar	itc depth	7
13	varchar	itc gross ton	8
14	varchar	itc length	7
15	varchar	itc net.ton	8
16	varchar	draft_ design	8
17	char	draft_ design_ units	2
18	char	dead.Weight ton	8
19	char	-	2
20	char	flag abbr	2
21	varchar	hailing.port	50
22	varchar	hailing_ state	2
23	varchar	hailing_ port_ port-province	50
24	varchar	route type	50
25	varchar	classification society	80
26	varchar	cargo authorization type	30
27	char	documented ind	1
28	varchar	documented status.type	30
29	char	inspected ind	1
30	varchar	inspected desc	30
31	char	state_ vessel ind	1
32	varchar	state_ vessel desc	30
33	char	lloyds_ind	1
34	varchar	lloyds desc	30
35	char	solas_ind	1
36	varchar	solas_desc	30
37	varchar	insp.subchapter.type	255
38	varchar	vessel_ class	50
39	varchar	vessel_ type	50
40	varchar	vessel_ subtype	50
41	varchar	vessel_ service	30
42	varchar	max passengers allowed	6
43	varchar	max_crew	6
44	varchar	self _propelled_ind	1
45	varchar	propulsion type	30
46	varchar	hull_ material	30
47	varchar	hull_ design_ type	30

48	varchar	hull_double_bottom_type	30
49	varchar	hull.double.side.type	30
50	varchar	call_sign	8
51	varchar	official_number	10
52	varchar	hull number	30
53	varchar	rbs hull number	30
54	varchar	imo number	30
55	varchar	vessel_age	4
56	varchar	build_shipyard	50
57	char	build_year	4
58	varchar	hull_build.party.name	80
59	varchar	-	80
60	varchar	horsepower_ahead	5
61	varchar	horsepower_astern	5
62	varchar	forebody_type_desc	30
63	varchar	hull_configuration	30
64	varchar	hull_shape	30
65	char	filler	1

Appendix A, Attachment 2. Reconciliation of Port Codes in USCG Vessel Arrival File and Port Description File

Port Code from Arrival File	Keep or drop	Port Code	Comment
7 AGRIUM 0	Drop	SCRMT0	Fresno, CA Nr Sacramento
16 ALEXANDRIA B 0	Drop		Alexandria Bay on the St. Lawrence
21 ALLIANCE 0	Drop		5 arrivals
34 ANGOON 0	Drop		Canadian icebreaker
38 ANTIOCH 0	Keep	SCRMT0	Antioch, CA nr Sacramento
41 APRA HARBOR 0	drop		Guam could combine with apra
42 ARABI 0	drop		St. Bernard port, Louisiana
66 BANGOR/BREWE 0	Keep	BANGME	Banqor ME
69 BARBOURS C 0	Keep	GALV	Barbours Cut Container terminal in Glaveston,TX
70 BARBOURS CUT 0	Keep	GALV	Barbours Cut Container terminal in Glaveston,TX
73 BATON ROUG 0	Keep	NRLNSSW	Baton Rouge
76 BAYONNE 0	Keep	BAYONN	Bayonne NJ
77 BAYOU COSOTT 0	Drop		Off-shore drilling rig
78 BAYPORT 0	Keep	PASAD	Bayport nr Pasadena TX
87 BELLINGHAM 0	Keep	BELHAM	Bellingham, WA
91 BERWICK 0	Drop		Berwick LA
94 BIENVILLE 0	Drop		Port Bienville, MS
95 BIGISL 0	Drop		Biq Island HI
100 BLOUNT ISL 0	Keep	JAX	Blount Island Terminal, Jacksonville, FL
101 BLOUNT ISLAN 0	Keep	JAX	Blount Island Terminal, Jacksonville, FL
104 BOLIVAR RO 0	Drop		Port Bolivar,TX
109 BRAINTREE 0	Keep		Fore River, Braintree, MA
116 BREVORT 0	drop		Brevort, MI on Great Lakes
117 BRIDGEPORT 0	Keep	BRIDPT	Bridgeport, CT
118 BRIDGEPORT A 0	Keep	BRIDPT	Bridgeport, CT
131 BURNS HARB 0	Drop		Burns Harbor ,IN on Lake Michiqan
136 CALCITE 0	Drop		Calcite, MI on Lake
138 CAMERON 0	Drop		Cameron ,TX
141 CAPE CANAV 0	Keep	PCANAV	Port Canaveral, FL
146 CAPE HENRY P 0	Keep	VIRN A	Virginia Beach, VA
150 CARYLSS 0	Drop		Lake Charles ,LA
157 CEDARVILLE 0	Drop		Cedarville, MI
160 CHANNEL VIEW 0	Keep	PTARAS	Port Arkansas, TX
164 CHARLEVOIX 0	Drop		Charlevoix, MI
166 CHEBOYGAN 0	Keep	CHBYGN	Cheboygan, MI on Lake
172 CHERRY POI 0	Keep	CHERPT	Cherry Point, WA

Port Code from Arrival File	Keep or drop	Port Code	Comment
175 CHESAPEAKE 0	Keep	CHESLV	Cheasapeake, VA
176 CHESAPEAKE C 0	Keep	CHESLV	Cheasapeake, VA
182 CHIGNIK 0	Keep	SEA	Seattle, WA fishing vessels
183 CHOCOLATE BA 0	Drop		Chocolate Bay, TX
184 CHRISTIANS 0	Keep	LIMETREE BA	LimetreeBay, St. Croix
204 COON COVE 0	Drop		Coon Cove, Alaska
209 CORPUS CHR 0	Keep	CORPUS	Corpus Christi, TX
222 DAMES POINT 0	Keep	JAX	Jacksonville, FL
223 DANIA 0	Keep	FTLAUD	Fort lauderdale, FL
230 DEER PARK 0	Keep	PASAD	Deer Park nr Pasadena TX
231 DESTREHAN 0	Keep	DESTHN	Destrahan, LA
233 DETOUR 0	Drop		DeTour, MI Lake Huron
237 DODGE ISLAND 0	Keep	MIAMI	Dodge Island nr Miami, FL
242 DRUMMOND ISL 0	Drop		Drummond Island, MI
246 DUTCH HARBOR 0	Keep	DUTCHH	Dutch Harbour, AK
248 EAST BOSTON 0	Keep	BOSTON	Boston, MA
254 EMPIRE 0	Drop		Empire, LA
268 FERNANDINA 0	Keep	FERNNA	Fernandina, FL
277 FOURCHON 0	Drop		Port Fourchon, LA
280 FREDERIKST 0	Keep	FRDSTD	Fredericsted, St. Croix
285 FRIDAY HARBO 0	Drop		Friday Harbor, WA
291 GALES FERRY 0	Keep	NLON	Near New London, CT
305 GATEWAY TERM 0	Keep	NHAV	New Haven, CT
309 GETTY PETROL 0	drop		two barges
311 GLADSTONE 0	drop		Gladstone, MI
313 GLOUCESTER 0	Keep	GLOUST	Glocester, MA
318 GRAMERCY 0	Keep	GRAMCY	Gramercy, LA
321 GREEN COVE 0	Keep	JAX	nr Jacksonville, FL
322 GREEN COVER 0	Keep	JAX	nr Jacksonville, FL
323 GREENPORT 0	Keep	OYBAY	nr Oyster Bay, NY
324 GREENS BAYOU 0	Keep	HOU	Houston, TX
329 GROTON/NEW L 0	Keep	NLON	Near New London, CT
337 GULFMEX 2 0	drop		Offshore termial
338 GULFPORT 0	Keep	GULFPT	Gulfport. MS
344 HAWK INLET 0	Keep	JUNEAU	Juneau, AK
346 HAY 0	Keep	ISLPK	Island Park, NY
359 HOUMA 0	Drop	NRLNSSW	nr New Orleans, LA
363 HOVENSA 0	Drop		Hovenssa, St Croix
376 INDIANA HARB 0	Keep	CHIC	East Chicago, IL
381 JACINTOPORT 0	Keep	HOU	Houston, TX

Port Code from Arrival File	Keep or drop	Port Code	Comment
382 JACKSONVIL 0	Keep	JAX	Jacksonville, FL
393 KAWAIHAE HAR 0	Drop		Kawaihae, HI
399 KEYSpan NORT 0	Keep	ISLPK	Island Park, NY
400 KEYSpan PORT 0	Keep	ISLPK	Island Park, NY
402 KINGS BAY 0	Keep	KINGBY	Kings Bay, FL nr Jacksonville
404 KIVILINA 0	Keep	KIVLNA	Kivalina, AK
417 LA PLACE 0	Drop		La Place, LA
421 LACKAWANA 0	Drop		Lackawana, NY
424 LAKE CHARL 0	Keep	LCHAR	Lake Charles, LA
438 LOCUS POINT 0	Keep	BALTO	Baltimore, MD
439 LOGISTICS TE 0	Drop		2 records
443 LOS ANGELE 0	Keep	LA/LB	Los Angeles
446 LUMMUS ISLAN 0	Keep	MIAMI	Miami, FL
448 MACKINAC 0	Keep	MACN	Mackinac, Island, MI
449 MACKINAW CIT 0	Keep	MACN	Mackinaw City, MI
450 MANCHESTER 0	Keep	HOU	Houston, TX
451 MANITOWOC 0	Keep	MANTWC	Manitowoc, WI
462 MATTITUCK 0	Keep	ISLPK	MATTITUCK, NY
475 MIAMI RIVER 0	Keep	MIAMI	Miami, FL
489 MORGAN'S POI 0	Keep	GALV	Barbours Cut Container terminal in Galveston, TX
492 MOTIVA BRIDG 0	Keep	WILMDL	Wilmington, DE
493 MOTIVA NEW H 0	Keep	WILMDL	Wilmington, DE
497 MSD SITKA 0	Keep	MSD SITKA	Sitka, AK
498 MSO PORT ART 0	Keep	MSOPort Ar	MSO Port Arthur, TX
503 MYRTLE GRO 0	Keep	MYRE	Myrtle Grove, LA
504 MYRTLE GROVE 0	Keep	MYRE	Myrtle Grove, LA
507 NASHVILLE 0	Keep	NRLNSSW	New Orleans, LA
508 NASHVILLE AV 0	Keep	NRLNSSW	New Orleans, LA
518 NEW HAVEN AN 0	Keep	NHAV	New Haven, CT
521 NEW LONDON S 0	Keep	NLON	New London, CT
522 NEW ORLEAN 0	Keep	NRLNSSW	New Orleans, LA
523 NEW ORLEANS 0	Keep	NRLNSSW	New Orleans, LA
525 NEW YORK CIT 0	Keep	NYC	New York City
528 NEWBURYPORT 0	Keep	SALEM	nr Salem, MA
529 NEWIBERIA 0	Keep	NRLNSSW	nr New Orleans, LA
532 NEWPORT 0	Keep	NEWPT	Newport, RI
537 NIKISHKA 0	DROP		Nikishka, AK
546 NORTHPORT AN 0	Keep	ISLPK	North Long Island nr Huntington
564 OFFSHORE LIG 0	Keep	MTKPS	offshore Montauk
571 OSTRICA 0	Keep	OSTRCA	Ostricala, LA

Port Code from Arrival File	Keep or drop	Port Code	Comment
580 PANAMA CIT 0	Keep	PANAMA	Panama City, FL
588 PATMS-ALL PO 0	Keep	PATMS-All P	MSO Port Arthur, TX
590 PAULINA 0	Keep	NRLNSSW	nr New Orleans, LA
606 PHILLIPS 0	Keep	ANCRGE	Nikiski, AK nr Anchorage
607 PHILLIPS DOC 0	Keep	ANCRGE	Nikiski, AK nr Anchorage
624 POINT COMF 0	DROP		9 Records
635 PORT ARTHU 0	Keep	PATMS-All P	MSO Port Arthur, TX
639 PORT CANAV 0	Keep	PCANAV	Port Canaveral, FL
643 PORT COVINGT 0	Keep	BALTO	Baltimore, MD
644 PORT DOLOMIT 0	Drop		Port Dolomite, MI near Cedarville
645 PORT EVERG 0	Keep	PTGLDS	Port Everglades, FL
647 PORT FOURCHO 0	Drop		Port Fourchon, LA
648 PORT HADLOCK 0	Keep	PUGET	Port Hadlock, WA
649 PORT HUENE 0	Keep	PORHUE	Port Hueneme, CA
652 PORT INLAND 0	Drop		Port Inland, MI
653 PORT JEFFE 0	Keep	PTJFSN	Port Jefferson, NY
657 PORT MANAT 0	Keep	TAMPA	Port Manatee, FL nr Tampa
658 PORT MANATEE 0	Keep	TAMPA	Port Manatee, FL nr Tampa
660 PORT NECHE 0	Keep	PTNECH	Port Neches, TX nr Por Arthur
663 PORT OF NEW 0	Drop		1 record
665 PORT SUTTO 0	Keep	TAMPA	Port Sutton, FL nr Tampa
666 PORT SUTTON 0	Keep	TAMPA	Port Sutton, FL nr Tampa
673 PRESQUE ISLE 0	Drop		Presquelsland, MI
674 PRIBILOF ISL 0	Drop		Pribilof Islands, AK
694 PUGET SOUN 0	Keep	PUGET	Puget Sound, WA
697 RATTLESNAKE 0	Keep	TAMPA	Rattlesnake Point, FL nr Tampa
700 REDWOOD CI 0	Keep	REDWOD	Redwood City, CA nr SF
703 RESERVE 0	Keep	NRLNSSW	Reserve, LA nr New Orleans
710 RIVERHEAD AN 0	Keep	ISLPK	Riverhead, NY
712 ROCHESTER 0	Drop		Rochester, NY
715 ROCKPORT 0	Keep	TAMPA	Rockport, FL nr Tampa
716 RODEO 0	Keep	SFRAN	Rodeo, CA nr SF
719 ROSEY ROADS 0	Drop		Rosey Roads, Puerto Rico
725 SABINE LIG 0	Keep	SAB LGT	Sabine, TX
728 SABINE RIVER 0	Keep	SAB LGT	Sabine, TX
729 SACRAMENTO 0	Keep	SCRMT0	Sacramento, CA
732 SAN FRANCI 0	Keep	SFRAN	San Francisco, CA
736 SAN JUAN 0	Keep	SJUAN	San Juan, Puerto Rico
738 SAN PEDRO 0	Keep	SPEDRO	San Pedro, CA
739 SAN PEDRO HA 0	Keep	SPEDRO	San Pedro, CA

Port Code from Arrival File	Keep or drop	Port Code	Comment
741 SANDFILL 0	Keep	SNDFIL	nr San Juan, Puerto Rico
744 SAULT STE. M 0	Drop		Sault Ste. Marie Michiqan
745 SAV 0	Keep	SAVGA	Savannah, GA
753 SEABROOK 0	Keep	GALV	Seabrook, TX nr Galveston
758 SEATTLE 0	Keep	SEA	Seattle, WA
768 SHEMA ISLAN 0	Drop		Shemya Island. AK
770 SILVER BAY 0	Drop		Silver bay, MN near Duluth
780 SOUTH BOSTON 0	Keep	BSN	Boston, MA
781 SOUTH LOCUST 0	Keep	BALTO	Baltimore, MD
782 SOUTH LOUISI 0	Keep	NRLNSSW	New Orleans, LA
784 SOUTHWEST 0	Keep	NRLNSSW	Baton Rouge, LA
785 SOUTHWEST HA 0	drop		1 record
794 ST. MICHAEL 0	drop		St. Michael. AK
795 ST. AUGUSTIN 0	Keep	STAUG	Saint Augustine, FL
796 ST. CHARLES 0	drop		Port St. Charles, Barbados
797 ST. CROIX 0	Keep	STCROX	Saint Croix, VI
798 ST. ELMO 0	drop		1 record; looks west coast
799 ST. GEORGE 0	drop		2 records
800 ST. JAMES 0	Keep	SJAMES	St. James, LA
801 ST. JOHN 0	Keep	ST JOHN	St. John, VI
802 ST. JOHNS 0	Keep	STJOAC	St. Johns, Antigua
804 ST. PAUL 0	Keep	SPIH	Saint Paul Island, AK
805 ST. PAUL ISL 0	Keep	SPIH	Saint Paul Island, AK
807 ST. ROSE 0	Keep	NRLNSSW	New Orleans, LA
808 ST. THOMAS 0	Keep	STTHOM	St Thomas, VI
813 STAR LAKE 0	drop		3 records
819 STONEPORT 0	drop		Stoneport, MI
820 STONEY POINT 0	Keep	STOI	Stony Point, CT
823 STURGEON BAY 0	Keep	STURBY	Sturgeon Bay, WI
830 SWP LIGHTER 0	Keep	SWP	Southwest Pass Lightering, LA
832 SWPASS LIGHT 0	Keep	SWP	Southwest Pass Lightering, LA
835 TACONITE HAR 0	Drop		Taconite Harbor, MN near Duluth
836 TAFT 0	Keep	NRLNSSW	New Orleans, LA
837 TALLABOA 0	Keep	TALLBY	Tallaboa, Puerto Rico
845 TINIAN 0	Drop		Tinian, Northern Marrianas
848 TOKSOOK 0	Drop		Toksook Bay, AK
851 TOLSTOI 0	Drop		5 records
853 TOSCO PORT J 0	Keep	NYC	Tosco Bay, NJ
854 TOSCO RIVERH 0	Keep	NYC	Tosco Bay, NJ
856 TRAVERSE CIT 0	Drop		Traverse City, MI
864 VANCOUVER 0	Keep	VANCOV	Vancouver
872 WAGGAMAN 0	Keep	NRLNSSW	Waggaman, LA
875 WASHINGTON 0	Keep	WASHDC	Washington, DC
876 WEEDON ISLAN 0	Keep	TAMPA	Weedon Island, FL nr Tampa
882 WHITING 0	Drop		Whiting, IN
884 WILLIAMS PIN 0	Drop		Williams Point, FL nr Indian River
885 WILLIAMS T-D 0	Keep	NHAV	William Terminal, New Haven, CT
886 WILMINGTON 0	Keep	WILMDL	Wilmington, DE

Appendix A, Attachment 3. Reconciliation of Port /State Designations for Port Codes in USCG Port Description File without State Designations

Port_Abbreviation	State	Port_ Description
ALSEN	Drop	ALSEN
BALTPS	MD	BALTIMORE PILOT STA
DARRO	LA	DARROW
FJORD	AK	COLLEGE FJORD
GEISMAR	LA	GEISMAR
HOONAH	AK	HOONAH
LOOP	LA	LOOP
OFFSHORE	NY	LIGHTERING-OFFSHORE
PORT AL	LA	PORT ALLEN
PROVIDENCE	RI	PROVIDENCE

Note: There was only one vessel arrival from 2002-2004 to the port with port abbreviation ALSEN. This record did not have any other data entered in the vessel arrival fields. The state for this port was not able to be determined.

Appendix A, Attachment 4. Match of USCG Port Codes with ANPR Port Regions and Port Areas

State_Abbreviation	Port_Abbreviation	Port_Description	Arrivals	ANPR port area	ANPR Port Region	Restriction period1	Restriction period2
CT	BRIDPT	BRIDGEPORT, CONNECTICUT	762	BRIDPT	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	GLSFRRY	DOW CHEMICAL, ALLYNS POINT	4	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	GROTON	GROTON	26	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	HRTFD	HARTFORD	1	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	MFORD	MILFORD	5	NHAV	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	MIDTOWN	MIDDLETOWN	13	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	MTKPS	MONTAUK PILOT STATION	49	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	MTVILLE	MONTVILLE	14	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	NHAV	NEW HAVEN	1,616	NHAV	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	NHT	NEW HAVEN TERMINAL	30	NHAV	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	NLON	NEW LONDON	302	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	NRWLK	NORWALK	23	BRIDPT	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	PTLANDCT	PORTLAND	1	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	STAM	STAMFORD	47	BRIDPT	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	STAO	STAMFORD	71	BRIDPT	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	STO I	STONY POINT, NEW YORK	2	NYC	MID-ATL BIS	3/1-4/30	9/1-10/31
CT	WETHFLD	WEATHERSFIELD	1	NLON	MID-ATL BIS	3/1-4/30	9/1-10/31
DE	WILMDL	WILMINGTON, DELAWARE	26	PHIL	MID-ATL DEL	2/1-4/30	10/1-12/31
FL	C CNVL	CAPE CANAVERAL	197	PCANAV	SE	12/1-3/31	
FL	FERNANDINA	MSO JACKSONVILLE	248	FERNANDINA	SE	12/1-3/31	
FL	FERNNA	FERNANDINA BEACH	319	FERNANDINA	SE	12/1-3/31	
FL	FNADNA	FERNADINA	229	FERNANDINA	SE	12/1-3/31	
FL	JACKSONVILL	JACKSONVILLE	1	JAX	SE	12/1-3/31	
FL	JAX	JACKSONVILLE	7,142	JAX	SE	12/1-3/31	
FL	KINGBY	KINGSBAY	1	JAX	SE	12/1-3/31	
FL	MAYPT	MAYPORT	1	JAX	SE	12/1-3/31	
FL	PCANAV	PORT CANAVERAL	42	PCANAV	SE	12/1-3/31	
FL	PTCD	PORT CANAVERAL	2,369	PCANAV	SE	12/1-3/31	
FL	STAUG	SAINT AUGUSTINE	1	JAX	SE	12/1-3/31	
GA	BRUNSWICK	BRUNSWICK	972	BRUNSWICK	MID-ATL SAV	11/1-4/30	
GA	BRUNWK	BRUNSWICK	433	BRUNSWICK	MID-ATL SAV	11/1-4/30	
GA	SAV	SAVANNAH	20	SAVGA	MID-ATL SAV	11/1-4/30	
GA	SAVANNAH		4,657	SAVGA	MID-ATL SAV	11/1-4/30	
GA	SAVGA	SAVANNAH	2,248	SAVGA	MID-ATL SAV	11/1-4/30	
GA	SAVMS	MSO SAVANNAH	78	SAVGA	MID-ATL SAV	11/1-4/30	
MA	BEVL	BEVERLY	1	SALEM	NE RACE PT	4/1-5/15	
MA	BRAOPN	BRAYTON POINT	4	NWBDFD	MID-ATL BIS	3/1-4/30	9/1-10/31
MA	BSN	BOSTON	733	BSN	NE RACE PT	4/1-5/15	
MA	CCOD	MSFO CAPE COD	100	CCOD	NE CCOD	1/1-4/30	

State_Abbreviation	Port_Abbreviation	Port_Description	Arrivals	ANPR port area	ANPR Port Region	Restriction period1	Restriction period2
MA	CHELSEA	CHELSEA	104	BSN	NE RACE PT	4/1-5/15	
MA	EVRET	EVERETT	303	BSN	NE RACE PT	4/1-5/15	
MA	FALL RIVER	FALL RIVER LINE PIER	4	NWBDFD	MID-ATL BIS	3/1-4/30	9/1-10/31
MA	GLOUST	GLOUCESTER, MASSACHUSETTS	6	SALEM	NE RACE PT	4/1-5/15	
MA	NEWBED	MSFO NEW BEDFORD	316	NWBDFD	MID-ATL BIS	3/1-4/30	9/1-10/31
MA	NWBDFD	NEW BEDFORD	4	NWBDFD	MID-ATL BIS	3/1-4/30	9/1-10/31
MA	NWYMTH	NORTH WEYMOUTH	8	BSN	NE RACE PT	4/1-5/15	
MA	QUINCY	QUINCY	95	BSN	NE RACE PT	4/1-5/15	
MA	REVERE	REVERE	63	BSN	NE RACE PT	4/1-5/15	
MA	SALEM	SALEM	35	SALEM	NE RACE PT	4/1-5/15	
MA	SNDWCH	SANDWICH	2	CCOD	NE CCOD	1/1-4/30	
MA	SOMSET	SOMERSET	1	NWBDFD	MID-ATL BIS	3/1-4/30	9/1-10/31
MA	WEYMTH	WEYMOUTH, MASSACHUSETTS	10	BSN	NE RACE PT	4/1-5/15	
MD	ANNOS	ANNAPOLIS	22	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	ANNOS ANCH	ANNAPOLIS ANCHORAGE	14	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	BALMS	HAWKINS POINT	1	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	BALTO	BALTIMORE	5,299	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	BALTO ANCH	BALTIMORE ANCHORAGE	3	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	BALTPS	BALTIMORE PILOT STATION	3	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	COVPN	COVE POINT	61	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	CURSA	CURTIS BAY	3	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	SPRWPT	SPARROWS POINT	116	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
MD	STMICHAELS	ST. MICHAELS	1	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
ME	BANGME	BANGOR, MAINE	21	SEARPT	NE GOM	1/1-12/31	
ME	BARHBR	BAR HARBOR	209	SEARPT	NE GOM	1/1-12/31	
ME	BUCKSPORT	COTP	38	SEARPT	NE GOM	1/1-12/31	
ME	BUCPT	BUCKSPORT	47	SEARPT	NE GOM	1/1-12/31	
ME	CASTIN	CASTINE	3	SEARPT	NE GOM	1/1-12/31	
ME	EASTPT	EASTPORT	111	EASTPT	NE GOM	1/1-12/31	
ME	PORTLAND	COTP	3,505	PORTLAND	NE GOM	1/1-12/31	
ME	PORTLD	PORTLAND, MAINE	17	PORTLAND	NE GOM	1/1-12/31	
ME	ROCKLD	ROCKLAND	3	SEARPT	NE GOM	1/1-12/31	
ME	SEARPT	SEARSPORT	320	SEARPT	NE GOM	1/1-12/31	
ME	WINRR	WINTERPORT	1	SEARPT	NE GOM	1/1-12/31	
NC	BEAUNC	BEAUFORT	1	MORCTY	MID-ATL MORCTY	12/1-4/30	
NC	MORCTY	MOREHEAD CITY	303	MORCTY	MID-ATL MORCTY	12/1-4/30	
NC	SUNYPT	SUNNY POINT	5	WILMNC	MID-ATL WILMNC	12/1-4/30	
NC	WILMNC	WILMINGTON (N. CAROLINA)	1,974	WILMNC	MID-ATL WILMNC	12/1-4/30	
NH	NEWING	NEWINGTON	17	PORTSMOUTH	NE GOM	1/1-12/31	
NH	PORD	NH-MA BORDER TO KENNEBUNKPORT, ME	514	PORTSMOUTH	NE GOM	1/1-12/31	
NH	PORTSMOUTH	COTP	190	PORTSMOUTH	NE GOM	1/1-12/31	
NJ	BAYONN	BAYONNE, NEW JERSEY	2	NYC	MID-ATL NY	2/1-4/30	9/1-10/31

State_Abbreviation	Port_Abbreviation	Port_Description	Arrivals	ANPR port area	ANPR Port Region	Restriction period1	Restriction period2
NJ	ELIZNJ	ELIZABETH	2	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NJ	NEWARK	NEWARK	10	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NJ	PAMBOY	PERTH AMBOY	1	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NJ	PTNWRK	PORT NEWARK	2	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	AMBROS	AMBROSE LV	1	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	CDSPNGHAR	COLD SPRING HARBOR	16	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	ISLPK	ISLAND PARK	36	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	LONI U	LONG ISL SOUND	227	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	MNTKPT	MONTAUK POINT	6	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	NORPT	NORTHPORT	128	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	NYC	NEW YORK	37	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	NYCMI	NEW YORK CITY	15,448	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	NYK	NEW YORK	7	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	OCNSDE	OCEANSIDE	83	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	OFFSHORE	LIGHTERING-OFFSHORE	61	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	OYBAY	OYSTER BAY	350	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	PMISLND	PLUM ISLAND	6	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	PTCHEST	PORT CHESTER	52	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	PTJFSN	PORT JEFFERSON	676	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	RIVRHD	RIVERHEAD	537	LONI U	MID-ATL BIS	3/1-4/30	9/1-10/31
NY	SINY	STATEN ISLAND	2	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
NY	STPLTN	STAPLETON	1	NYC	MID-ATL NY	2/1-4/30	9/1-10/31
PA	CHESTR	CHESTER, PENNSYLVANIA	13	PHIL	MID-ATL DEL	2/1-4/31	10/1-12/32
PA	MARHK	MARCUS HOOK	8	PHIL	MID-ATL DEL	2/1-4/32	10/1-12/33
PA	MORSVL	MORRISVILLE	1	PHIL	MID-ATL DEL	2/1-4/33	10/1-12/34
PA	PHILA	PHILADELPHIA	72	PHIL	MID-ATL DEL	2/1-4/34	10/1-12/35
PA	PHILPS	PHILADELPHIA - DEL BAY ENT	66	PHIL	MID-ATL DEL	2/1-4/36	10/1-12/37
PA	PHIMS	PHILADELPHIA, DELAWARE, SOUTH JERSEY	7,224	PHIL	MID-ATL DEL	2/1-4/37	10/1-12/38
RI	BLOCKI	BLOCK ISLAND	2	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	BRENRF	BRENTON REEF	7	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	BRSTOL	BRISTOL, RHODE ISLAND	1	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	DAVSVL	DAVISVILLE	175	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	MELVIL	MELVILLE	2	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	NARBAY	NARRAGANSETT BAY	183	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	NEWPT	NEWPORT, RHODE ISLAND	138	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	PROV	PROVIDENCE, RHODE ISLAND	267	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	PROVIDENCE		166	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	PTSMRI	PORTSMOUTH, RHODE ISLAND	2	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
RI	TIVRTN	TIVERTON	1	PROV	MID-ATL BIS	3/1-4/30	9/1-10/31
SC	BUFTSC	BEAUFORT	8	SAVGA	MID-ATL SAV	11/1-4/30	
SC	CHARLESTON		4,337	CHARLESTON	MID-ATL-CHARL	10/1-4/30	
SC	CHASN	CHARLESTON	2,147	CHARLESTON	MID-ATL-CHARL	10/1-4/30	

State_Abbreviation	Port_Abbreviation	Port_Description	Arrivals	ANPR port area	ANPR Port Region	Restriction period1	Restriction period2
SC	GEOTN	GEORGETOWN, S. CAROLINA	82	GEOTN	MID-ATL GEOTN	10/1-4/30	
SC	PORT ROYAL	PORT ROYAL	43	SAVGA	MID-ATL SAV	11/1-4/30	
SC	WANDO	WANDO	411	CHARLESTON	MID-ATL-CHARL	10/1-4/30	
VA	ALEXVA	ALEXANDRIA	4	BALTO	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	CAPCHAZ	CAPE CHARLES	6	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	CHEH N	CHEATHAM ANNEX	3	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	CHENRY	CAPE HENRY	4	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	CHESLV	CHESAPEAKE LV	189	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	HAMPRD	HAMPTON ROADS	45	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	HAMPTONRDS	HAMPTON ROADS	1	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	HOPE	HOPEWELL	73	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	JAMSTN	JAMESTOWN, VIRGINIA	1	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	LCREEK	LITTLE CREEK	15	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	LYNANN	LYNNHAVEN ANCHORAG	8	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	NORFOLK	NORFOLK INTERNATIONAL	983	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	NORVA	NORFOLK	3,974	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	NPTNWS	NEWPORT NEWS	945	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	PINYPT	PINEY POINT	58	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	PTSMVA	PORTSMOUTH, VIRGINIA	984	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	RICHMD	RICHMOND	135	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	VIRN A	VIRGINIA BEACH	26	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31
VA	YORKTN	YORKTOWN	130	HAMPTONRDS	MID-ATL CHES BAY	2/1-4/30	11/1-12/31

The GLM Procedure

Class Level Information		
Class	Levels	Values
Nathan_Vessel_Classification	15	Bulk Carrier Combination Carrier (e.g. OBO) Container Ship Fishing Vessel Freight Barge General Dry Cargo Ship Industrial Vessel Passenger Ship Refrigerated Cargo Ship Research Vessel Ro-Ro Cargo Ship School Ship Tank Barge Tank Ship Towing Vessel

Number of Observations Read	5886
Number of Observations Used	5886

The GLM Procedure

Dependent Variable: dead_Weight_ton

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	1.4862115E13	990807683838	12706.7	<.0001
Error	5871	457791241702	77975002.845		
Uncorrected Total	5886	1.5319906E13			

R-Square	Coeff Var	Root MSE	dead_Weight_ton Mean
0.925315	22.34725	8830.346	39514.23

Source	DF	Type I SS	Mean Square	F Value	Pr > F
gross_ton*Nathan_Ves	15	1.4862115E13	990807683838	12706.7	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
gross_ton*Nathan_Ves	15	1.4862115E13	990807683838	12706.7	<.0001

Parameter	Estimate	Standard Error	t Value	Pr > t
gross_ton*Nathan_Ves Bulk Carrier	1.763663320	0.00787156	224.06	<.0001
gross_ton*Nathan_Ves Combination Carrier (e.g. OBO)	1.705058159	0.02969307	57.42	<.0001
gross_ton*Nathan_Ves Container Ship	1.160717153	0.00907167	127.95	<.0001
gross_ton*Nathan_Ves Fishing Vessel	0.565705107	0.79089658	0.72	0.4745
gross_ton*Nathan_Ves Freight Barge	1.676291420	0.33176765	5.05	<.0001
gross_ton*Nathan_Ves General Dry Cargo Ship	1.369413526	0.01285497	106.53	<.0001
gross_ton*Nathan_Ves Industrial Vessel	1.162743779	0.11356224	10.24	<.0001
gross_ton*Nathan_Ves Passenger Ship	0.176182630	0.01723172	10.22	<.0001
gross_ton*Nathan_Ves Refrigerated Cargo Ship	1.081557537	0.05563150	19.44	<.0001

The GLM Procedure

Dependent Variable: dead_Weight_ton

Parameter	Estimate	Standard Error	t Value	Pr > t
gross_ton*Nathan_Ves Research Vessel	0.460767398	1.71967966	0.27	0.7888
gross_ton*Nathan_Ves Ro-Ro Cargo Ship	0.425580316	0.01062633	40.05	<.0001
gross_ton*Nathan_Ves School Ship	0.523009686	0.45986782	1.14	0.2555
gross_ton*Nathan_Ves Tank Barge	2.058201277	0.10467965	19.66	<.0001
gross_ton*Nathan_Ves Tank Ship	1.714887087	0.00524801	326.77	<.0001
gross_ton*Nathan_Ves Towing Vessel	0.763876049	1.94364479	0.39	0.6943

Appendix A, Attachment 6. Summary Vessel Type from Four USCG Vessel Description Fields

vessel_class	vessel_type	vessel_subtype	vessel_service	Nathan_Vessel_Classification
Barge	Bulk Liquid Cargo (Tank) Barge		Tank Barge	Tank Barge
Barge	Bulk Liquid Cargo (Tank) Barge	General	Tank Barge	Tank Barge
Barge	Bulk Liquid Cargo (Tank) Barge	Liquid Chemical Cargo Barge	Tank Barge	Tank Barge
Barge	Bulk Liquid Cargo (Tank) Barge	Non-Flammable Liquid Cargo Barge	Tank Barge	Tank Barge
Barge	Bulk Liquid Cargo (Tank) Barge	Oil Cargo Barge	Tank Barge	Tank Barge
Barge	Bulk Liquid Cargo (Tank) Barge	UNSPECIFIED	Tank Barge	Tank Barge
Barge	Container Barge		Freight Barge	Freight Barge
Barge	Container Barge	UNSPECIFIED	Freight Barge	Freight Barge
Barge	Deck Barge	General	Freight Barge	Freight Barge
Barge	Deck Barge	Roll-on Roll-off	Freight Barge	Freight Barge
Barge	Dry Cargo Barge	General	Freight Barge	Freight Barge
Barge	Dry Cargo Barge	Open General Cargo	Freight Barge	Freight Barge
Barge	General		Freight Barge	Freight Barge
Barge	General	UNSPECIFIED	Freight Barge	Freight Barge
Barge	Industrial Barge	Derrick/Crane Barge	Industrial Vessel	Freight Barge
Barge	Industrial Barge	General	Industrial Vessel	Freight Barge
Barge	Industrial Barge	Pipe laying Barge	Industrial Vessel	Freight Barge
Barge	Integrated Tug and Barge (Barge)	Bulk Liquid	Tank Barge	Tank Barge
Barge	UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Freight Barge
Bulk Carrier	Cement Carrier		Freight Ship	Bulk Carrier
Bulk Carrier	Cement Carrier	UNSPECIFIED	Freight Ship	Bulk Carrier
Bulk Carrier	Cement Carrier	UNSPECIFIED	UNSPECIFIED	Bulk Carrier
Bulk Carrier	Combination Carrier (e.g. OBO)	Bulk/Oil	Freight Ship	Combination Carrier (e.g. OBO)
Bulk Carrier	Combination Carrier (e.g. OBO)	General	Freight Ship	Combination Carrier (e.g. OBO)
Bulk Carrier	Combination Carrier (e.g. OBO)	Ore/Bulk/Oil	Freight Ship	Combination Carrier (e.g. OBO)
Bulk Carrier	Combination Carrier (e.g. OBO)	UNSPECIFIED	Freight Ship	Combination Carrier (e.g. OBO)
Bulk Carrier	General		Freight Ship	Bulk Carrier
Bulk Carrier	General	General	Freight Ship	Bulk Carrier
Bulk Carrier	General	Self-Discharging	Freight Ship	Bulk Carrier
Bulk Carrier	General	UNSPECIFIED	Freight Ship	Bulk Carrier
Bulk Carrier	General	UNSPECIFIED	UNSPECIFIED	Bulk Carrier
Bulk Carrier	Ore Carrier	General	Freight Ship	Bulk Carrier
Bulk Carrier	Ore Carrier	Self-Discharging	Freight Ship	Bulk Carrier
Bulk Carrier	Ore Carrier	UNSPECIFIED	Freight Ship	Bulk Carrier
Bulk Carrier	UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Bulk Carrier
Bulk Carrier	Woodchips Carrier	General	Freight Ship	Bulk Carrier
Bulk Carrier	Woodchips Carrier	Self-Discharging	Freight Ship	Bulk Carrier
Fishing Vessel	Fish Catching Vessel	General	Commercial Fishing Vessel	Fishing Vessel
Fishing Vessel	Fish Catching Vessel	Pot/Trap	Commercial Fishing Vessel	Fishing Vessel
Fishing Vessel	Fish Catching Vessel	Trawler, Stern	Commercial Fishing Vessel	Fishing Vessel
Fishing Vessel	Fishing Catching/Processing Vessel	General	Commercial Fishing Vessel	Fishing Vessel
Fishing Vessel	Fishing Catching/Processing Vessel	General Catcher/Processor	Commercial Fishing Vessel	Fishing Vessel
General Dry Cargo Ship	Barge Carrier (e.g. LASH)	LASH Carrier	Freight Ship	General Dry Cargo Ship
General Dry Cargo Ship	Container Ship		Freight Ship	Container Ship
General Dry Cargo Ship	Container Ship	Bulk/Container Carrier	Freight Ship	Container Ship
General Dry Cargo Ship	Container Ship	General	Freight Ship	Container Ship
General Dry Cargo Ship	Container Ship	General Cargo/Container	Freight Ship	Container Ship
General Dry Cargo Ship	Container Ship	UNSPECIFIED	Freight Ship	Container Ship
General Dry Cargo Ship	Container Ship	UNSPECIFIED	UNSPECIFIED	Container Ship
General Dry Cargo Ship	General		Freight Ship	General Dry Cargo Ship
General Dry Cargo Ship	General	UNSPECIFIED	Freight Ship	General Dry Cargo Ship
General Dry Cargo Ship	General	UNSPECIFIED	UNSPECIFIED	General Dry Cargo Ship
General Dry Cargo Ship	Heavy Load Carrier		Freight Ship	General Dry Cargo Ship

vessel_class	vessel_type	vessel_subtype	vessel_service	Nathan_Vessel_Classification
General Dry Cargo Ship	Heavy Load Carrier	UNSPECIFIED	Freight Ship	General Dry Cargo Ship
General Dry Cargo Ship	Pallets Carrier		Freight Ship	General Dry Cargo Ship
General Dry Cargo Ship	UNSPECIFIED	UNSPECIFIED	Freight Ship	General Dry Cargo Ship
Miscellaneous Vessel	Cable laying Vessel		Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Cable laying Vessel	UNSPECIFIED	Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Cutter/Dredger	General	Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Cutter/Dredger	Hopper	Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Cutter/Dredger	Suction/Hopper	Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Drydock, Floating		Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	General		Unclassified	Industrial Vessel
Miscellaneous Vessel	General	UNSPECIFIED	Unclassified	General Dry Cargo Ship
Miscellaneous Vessel	Ice Breaker		Public Vessel, Unclassified	Industrial Vessel
Miscellaneous Vessel	Oil Recovery Vessel	General	Oil Recovery	Industrial Vessel
Miscellaneous Vessel	Pipe laying		Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Repair Vessel		Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	Supply Vessel (not OSV)		Industrial Vessel	Industrial Vessel
Miscellaneous Vessel	UNSPECIFIED		UNSPECIFIED	General Dry Cargo Ship
Miscellaneous Vessel	UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	General Dry Cargo Ship
Offshore	Offshore Supply Vessel	General	Offshore Supply Vessel	General Dry Cargo Ship
Offshore	Offshore Supply Vessel	General	Towing Vessel	Towing Vessel
Passenger Ship	Attraction Vessel	General (6 or Fewer)	Passenger (6 or Fewer)	Passenger Ship
Passenger Ship	Cruise Ship Launch/Tender	UNSPECIFIED	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Excursion/Tour Vessel	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Ferry	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Ferry	General (More Than 6)	Public Freight	Passenger Ship
Passenger Ship	Ferry	Non Ro-Ro Ferry (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Ferry	Ro-Ro Ferry (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Gaming Vessel	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	General	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	General	General (More Than 6)	Passenger Barge (More Than 6)	Passenger Ship
Passenger Ship	Harbor Cruise Vessel	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Ocean Cruise Vessel	General (6 or Fewer)	Passenger (6 or Fewer)	Passenger Ship
Passenger Ship	Ocean Cruise Vessel	General (More Than 6)	Passenger (More Than 6)	Passenger Ship
Passenger Ship	Ocean Cruise Vessel	UNSPECIFIED	Passenger (More Than 6)	Passenger Ship
Passenger Ship	UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Passenger Ship
Recreational	Motor Propelled Vessels	General	Recreational	Recreational
Recreational	Motor Propelled Vessels	UNSPECIFIED	Recreational	Recreational
Recreational	Motor Propelled Vessels	Yacht, Luxury	Recreational	Recreational
Recreational	Sailing Vessels	General	Recreational	Recreational
Recreational	Sailing Vessels	Motor sailer	Recreational	Recreational
Recreational	UNSPECIFIED	UNSPECIFIED	Recreational	Recreational
Refrigerated Cargo Ship	Container Ship		Freight Ship	Refrigerated Cargo Ship
Refrigerated Cargo Ship	Container Ship	UNSPECIFIED	UNSPECIFIED	Refrigerated Cargo Ship
Refrigerated Cargo Ship	General		Freight Ship	Refrigerated Cargo Ship
Refrigerated Cargo Ship	General	UNSPECIFIED	Freight Ship	Refrigerated Cargo Ship
Research Ship	General		Research Vessel	Research Vessel
Research Ship	General	UNSPECIFIED	Research Vessel	Research Vessel
Research Ship	Oceanographic		Research Vessel	Research Vessel
Ro-Ro Cargo Ship	General		Freight Ship	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	General	UNSPECIFIED	Freight Ship	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	General	UNSPECIFIED	UNSPECIFIED	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	Ro-Ro/Container		Freight Ship	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	Ro-Ro/Container	UNSPECIFIED	Freight Ship	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	Ro-Ro/Container	UNSPECIFIED	UNSPECIFIED	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	Vehicle Carrier		Freight Ship	Ro-Ro Cargo Ship
Ro-Ro Cargo Ship	Vehicle Carrier	UNSPECIFIED	Freight Ship	Ro-Ro Cargo Ship

vessel_class	vessel_type	vessel_subtype	vessel_service	Nathan_Vessel_Classification
Ro-Ro Cargo Ship	Vehicle Carrier	UNSPECIFIED	UNSPECIFIED	Ro-Ro Cargo Ship
School Ship	General		School Ship	School Ship
School Ship	General	UNSPECIFIED	School Ship	School Ship
School Ship	Sailing School	UNSPECIFIED	School Ship	School Ship
School Ship	Training		School Ship	School Ship
Tank Ship	Chemical Tank Ship	Chemical Tank Ship	Tank Ship	Tank Ship
Tank Ship	Chemical Tank Ship	General	Tank Ship	Tank Ship
Tank Ship	Chemical Tank Ship	Oil & Chemical Tank Ship	Tank Ship	Tank Ship
Tank Ship	Chemical Tank Ship	UNSPECIFIED	Tank Ship	Tank Ship
Tank Ship	Chemical Tank Ship	UNSPECIFIED	UNSPECIFIED	Tank Ship
Tank Ship	Gas Carrier	Anhydrous Ammonia	Tank Ship	Tank Ship
Tank Ship	Gas Carrier	General	Tank Ship	Tank Ship
Tank Ship	Gas Carrier	LNG	Tank Ship	Tank Ship
Tank Ship	Gas Carrier	LPG	Tank Ship	Tank Ship
Tank Ship	General		Tank Ship	Tank Ship
Tank Ship	General	UNSPECIFIED	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	Asphalt, Bitumen Tank Ship	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	Crude & Products Tank Ship	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	Crude & Products Tank Ship	UNSPECIFIED	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	Crude Oil Tank Ship	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	General	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	Oil Products Tank Ship	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	UNSPECIFIED	Tank Ship	Tank Ship
Tank Ship	Petroleum Oil Tank Ship	UNSPECIFIED	UNSPECIFIED	Tank Ship
Tank Ship	UNSPECIFIED	UNSPECIFIED	Tank Ship	Tank Ship
Tank Ship	Vegetable Oil Tank Ship		Tank Ship	Tank Ship
Towing Vessel	General		Towing Vessel	Towing Vessel
Towing Vessel	General	UNSPECIFIED	Towing Vessel	Towing Vessel
Towing Vessel	General	UNSPECIFIED	UNSPECIFIED	Towing Vessel
Towing Vessel	Integrated Tug and Barge (Tug)		Towing Vessel	Towing Vessel
Towing Vessel	Integrated Tug and Barge (Tug)	UNSPECIFIED	Towing Vessel	Towing Vessel
Towing Vessel	Integrated Tug and Barge (Tug)	UNSPECIFIED	UNSPECIFIED	Towing Vessel
Towing Vessel	Pushing Ahead (Towboat)		Towing Vessel	Towing Vessel
Towing Vessel	Pushing Ahead (Towboat)	UNSPECIFIED	Towing Vessel	Towing Vessel
Towing Vessel	Ship Assist Tug		Towing Vessel	Towing Vessel
Towing Vessel	Towing Behind (Tug)		Towing Vessel	Towing Vessel
Towing Vessel	Towing Behind (Tug)	UNSPECIFIED	Towing Vessel	Towing Vessel
Towing Vessel	Towing Behind (Tug)	UNSPECIFIED	UNSPECIFIED	Towing Vessel
UNSPECIFIED	General	UNSPECIFIED	Freight Ship	General Dry Cargo Ship
UNSPECIFIED	UNSPECIFIED		UNSPECIFIED	General Dry Cargo Ship
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Freight Barge	Freight Barge
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Freight Ship	General Dry Cargo Ship
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Industrial Vessel	Industrial Vessel
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Offshore Supply Vessel	Industrial Vessel
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Public Freight	General Dry Cargo Ship
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Public Tankship/Barge	Tank Barge
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Public Vessel, Unclassified	General Dry Cargo Ship
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Tank Barge	Tank Barge
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Tank Ship	Tank Ship
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Towing Vessel	Towing Vessel
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Drop
UNSPECIFIED	UNSPECIFIED	UNSPECIFIED	Unclassified	Drop

Appendix B

**VESSEL ARRIVALS BY PORT
AREA AND AVERAGE VESSEL
DWT**

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Total East Coast

ANPR Port Area: All

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	3,088	10,962	25,979	39,480	65,559	35,490	3,114	12,644	28,856	40,960	62,638	36,265
Combination Carriers	146	39,754	65,879	86,476	105,648	71,720	167	43,298	67,114	88,788	107,891	74,664
Containerships	8,972	16,378	35,482	46,914	60,596	39,818	9,215	17,263	36,914	48,491	61,733	40,987
Freight Barges	279	5,545	13,034	16,002	24,372	13,852	252	8,688	13,169	16,532	19,588	12,761
General Cargo Vessels	2,159	4,563	10,681	22,267	41,979	19,843	1,883	4,580	10,917	21,786	41,578	19,607
Passenger Vessels	1,045	2,537	7,013	8,735	14,836	8,109	1,197	1,768	6,367	9,108	13,683	7,541
Refrigerated Cargo Vessels	520	6,629	10,320	13,757	25,362	14,010	650	7,139	10,248	12,222	26,248	13,745
Ro-Ro Cargo Vessels	3,512	10,242	15,322	19,843	38,577	20,881	3,504	10,242	14,931	18,610	37,141	20,205
Tank Barges	746	4,468	8,018	13,018	24,638	12,452	1,251	3,157	6,495	10,525	20,463	10,082
Tankers	5,321	16,042	37,300	49,831	109,483	53,001	5,755	16,439	39,059	50,974	112,697	54,645
Towing Vessel	418	130	152	208	630	266	462	145	-	-	655	250
Other a/	88	603	1,900	4,338	8,544	3,694	91	524	1,878	7,931	16,697	6,618
Total all vessel types	26,294	7,901	21,694	39,792	68,352	34,413	27,541	7,230	21,660	40,673	69,892	34,850

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Gulf of Maine

ANPR Port Area: Eastport, ME

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	19	14,113	15,719	18,742	39,618	20,880	16	13,118	15,590	26,132	44,425	23,848
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	7	9,047	40,300	42,752	44,169	32,624	5	24,375	41,409	43,759	49,755	36,734
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	6	12,947	39,780	41,936	47,029	32,762	20	9,113	15,539	34,913	46,203	23,940
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	32	12,390	16,080	31,192	43,507	25,677	41	10,714	15,626	35,331	45,603	25,464

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Gulf of Maine

ANPR Port Area: Searsport, ME

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	15	6,959	-	7,233	27,375	11,078	14	7,023	12,833	27,496	39,466	21,070
Combination Carriers	1	54,502	-	-	-	54,502	1	54,502	-	-	-	54,502
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	1	7,051	-	-	-	7,051	-	-	-	-	-	-
Passenger Vessels	56	2,996	6,336	7,966	9,827	6,369	67	3,859	5,908	6,941	9,163	6,396
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	1	4,880	-	-	-	4,880
Tank Barges	64	6,198	9,367	12,721	18,312	11,021	24	6,667	8,639	12,729	15,565	10,900
Tankers	96	10,662	34,241	37,134	45,735	29,084	95	11,547	33,938	37,761	48,871	28,370
Towing Vessel	1	152	-	-	-	152	3	679	-	-	-	679
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	234	5,034	9,212	16,722	39,035	17,444	205	5,169	9,991	26,822	45,623	18,252

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Gulf of Maine

ANPR Port Area: Portland, ME

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	107	15,349	26,135	34,866	46,782	30,634	319	21,835	26,728	35,050	51,997	33,793
Combination Carriers	10	96,936	103,200	-	109,798	101,981	22	95,633	-	-	109,823	98,213
Containerships	40	21,615	43,318	56,864	62,722	44,177	224	21,126	40,954	53,909	61,211	43,830
Freight Barges	2	13,185	-	-	-	13,185	2	655	-	16,537	-	8,596
General Cargo Vessels	28	6,776	12,965	18,143	35,711	17,474	85	9,367	15,237	28,275	44,471	23,663
Passenger Vessels	24	4,605	7,700	8,585	10,708	7,354	21	4,060	6,819	8,622	10,774	6,956
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	88	4,880	9,991	13,493	16,914	11,203	259	5,691	11,371	14,692	20,910	13,036
Tank Barges	15	2,744	9,695	13,642	19,981	10,951	29	4,815	8,970	12,548	27,069	12,770
Tankers	373	25,558	66,640	99,721	110,079	74,961	488	19,884	41,184	93,358	121,393	68,566
Towing Vessel	3	232	287	-	-	269	33	126	146	151	969	289
Other a/	4	6,864	7,935	9,200	9,820	8,455	8	1,284	8,969	11,852	14,167	9,068
Total all vessel types	694	9,248	27,839	66,175	106,139	51,732	1,490	8,707	23,543	41,531	93,445	41,760

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Gulf of Maine

ANPR Port Area: Portsmouth, NH

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	50	33,510	38,290	46,953	64,363	44,420	67	29,513	37,787	40,616	49,874	38,284
Combination Carriers	1	54,502	-	-	-	54,502	3	37,695	38,633	54,502	-	43,610
Containerships	1	23,064	-	-	-	23,064	56	27,953	42,793	55,849	63,012	46,904
Freight Barges	10	9,694	-	13,353	14,269	11,707	-	-	-	-	-	-
General Cargo Vessels	5	11,662	22,270	33,750	-	22,619	10	8,331	24,579	31,884	40,910	25,162
Passenger Vessels	-	-	-	-	-	-	1	17	-	-	-	17
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	5	51,157	-	51,648	52,880	51,600
Tank Barges	20	8,221	11,291	12,825	24,802	14,285	2	13,000	-	14,877	-	13,938
Tankers	98	13,485	36,541	38,594	45,722	33,159	129	16,230	37,193	41,183	50,682	36,074
Towing Vessel	1	820	-	-	-	820	2	846	-	-	-	846
Other a/	1	7,935	-	-	-	7,935	2	919	-	9,200	-	5,060
Total all vessel types	187	10,588	31,151	38,326	51,541	32,475	277	18,361	37,203	41,941	54,769	37,997

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Off Race Point

ANPR Port Area: Salem, MA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	21	38,899	43,383	73,294	77,498	56,745	7	40,875	-	49,463	75,000	48,204
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	1	3,780	-	-	-	3,780
Refrigerated Cargo Vessels	2	5,691	-	7,102	-	6,397	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	17,176	-	-	-	17,176	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	1	45,425	-	-	-	45,425	1	61,438	-	-	-	61,438
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	25	25,881	41,477	68,202	77,498	50,682	9	33,456	-	49,463	68,219	44,738

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Off Race Point

ANPR Port Area: Boston, MA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	63	15,455	18,192	34,833	52,901	28,055	34	17,017	22,574	37,143	56,609	32,539
Combination Carriers	1	61,539	-	-	-	61,539	1	38,633	-	-	-	38,633
Containerships	149	24,185	38,670	45,233	51,747	38,793	77	12,497	43,305	49,140	51,977	37,655
Freight Barges	1	16,537	-	-	-	16,537	2	3,079	-	5,275	-	4,177
General Cargo Vessels	21	7,000	-	11,563	29,795	13,296	7	2,302	6,037	20,806	41,155	14,206
Passenger Vessels	91	3,216	6,999	8,200	10,097	6,769	20	3,686	7,129	-	10,058	6,389
Refrigerated Cargo Vessels	-	-	-	-	-	-	4	7,234	7,368	-	-	7,335
Ro-Ro Cargo Vessels	134	4,191	11,662	14,447	20,241	10,738	35	4,167	-	-	15,351	6,723
Tank Barges	2	2,141	-	6,247	-	4,194	-	-	-	-	-	-
Tankers	397	28,428	36,628	40,609	59,110	41,003	205	29,430	38,334	41,885	100,947	51,872
Towing Vessel	-	-	-	-	-	-	1	118	-	-	-	118
Other a/	2	816	-	6,864	-	3,840	4	265	396	500	518	420
Total all vessel types	861	6,530	25,291	38,070	53,252	30,492	390	7,114	31,796	41,228	75,959	38,924

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Northeastern US- Cape Cod Bay

ANPR Port Area: Cape Cod, MA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	1	54,502	-	-	-	54,502	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	12	4,000	6,911	7,700	-	6,578	9	3,467	-	4,979	8,426	4,737
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	10	41,905	57,593	63,329	68,926	56,874	13	54,217	64,400	67,344	74,071	63,395
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	23	5,456	7,700	49,234	65,568	30,529	22	3,467	23,119	62,036	71,630	39,398

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: New Bedford, MA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	44	35,424	-	-	57,731	39,987	58	33,246	40,839	60,215	72,026	48,215
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	1	3,188	-	-	-	3,188
Freight Barges	1	24,103	-	-	-	24,103	-	-	-	-	-	-
General Cargo Vessels	33	1,155	4,861	11,054	23,158	8,678	26	1,328	5,856	9,562	24,142	8,559
Passenger Vessels	29	15	17	7,700	-	3,725	-	-	-	-	-	-
Refrigerated Cargo Vessels	11	6,099	-	6,116	6,489	6,175	11	6,029	6,387	6,658	7,625	6,564
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	5	438	-	4,748	5,006	2,214
Tankers	5	12,895	22,780	31,069	37,389	23,406	10	10,485	13,947	17,542	22,611	15,720
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	47	-	149	-	98	-	-	-	-	-	-
Total all vessel types	125	1,883	7,225	30,025	57,731	18,905	111	3,957	14,689	36,246	63,914	29,393

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: Providence, RI

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	93	19,420	33,120	37,094	48,878	34,103	83	19,373	34,239	40,766	52,605	36,554
Combination Carriers	2	54,502	-	76,324	-	65,413	2	38,633	-	78,488	-	58,561
Containerships	1	17,914	-	-	-	17,914	2	7,802	-	7,910	-	7,856
Freight Barges	1	3,510	-	-	-	3,510	-	-	-	-	-	-
General Cargo Vessels	18	1,691	10,516	14,530	26,061	12,634	24	9,277	10,599	11,771	27,036	13,986
Passenger Vessels	37	2,801	4,635	6,669	9,717	5,331	35	2,064	6,007	7,010	10,264	6,054
Refrigerated Cargo Vessels	2	5,408	-	12,206	-	8,807	4	6,347	6,413	7,000	10,713	7,618
Ro-Ro Cargo Vessels	33	11,866	15,569	17,633	24,190	17,149	80	12,559	14,379	16,797	18,284	15,285
Tank Barges	1	19,500	-	-	-	19,500	2	436	-	14,877	-	7,657
Tankers	103	9,974	31,411	39,420	48,128	31,871	121	22,704	38,987	43,551	55,079	39,861
Towing Vessel	-	-	-	-	-	-	3	150	679	1,548	-	792
Other a/	6	2,118	-	-	3,372	2,327	1	567	-	-	-	567
Total all vessel types	297	5,876	17,625	33,539	46,392	25,752	357	7,879	16,419	36,043	49,787	27,477

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: New London, CT

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	8	16,564	23,003	47,053	52,675	34,121	23	17,588	38,486	43,472	47,035	35,822
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	2	39,749	-	49,755	-	44,752
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	9	12,457	37,684	46,990	47,028	32,386	10	24,059	37,312	42,919	48,412	36,678
Passenger Vessels	4	42	-	-	7,700	1,956	32	212	-	-	-	212
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	29	3,391	6,258	10,362	16,918	8,889	69	3,814	5,611	6,670	15,502	7,731
Tankers	6	19,228	33,288	35,491	47,083	31,268	8	14,488	40,262	47,351	47,431	37,383
Towing Vessel	-	-	-	-	-	-	1	74	-	-	-	74
Other a/	-	-	-	-	-	-	1	3,030	-	-	-	3,030
Total all vessel types	56	3,471	10,449	19,572	42,649	18,173	146	748	5,261	14,405	41,542	14,538

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: New Haven, CT

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	75	20,169	27,497	38,818	50,124	33,841	67	23,543	29,733	39,177	53,132	35,913
Combination Carriers	1	8,966	-	-	-	8,966	2	47,240	-	83,155	-	65,198
Containerships	5	22,948	29,519	46,956	49,755	34,425	1	49,755	-	-	-	49,755
Freight Barges	4	785	13,442	-	-	10,278	5	1,182	-	-	16,537	4,253
General Cargo Vessels	46	8,404	20,071	27,680	43,343	24,247	38	14,743	22,192	26,215	42,147	24,703
Passenger Vessels	-	-	-	-	-	-	5	214	-	-	-	214
Refrigerated Cargo Vessels	1	13,613	-	-	-	13,613	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	15,092	-	-	-	15,092	-	-	-	-	-	-
Tank Barges	134	5,619	7,844	11,708	18,855	10,803	247	4,471	7,035	11,476	19,450	10,508
Tankers	160	19,467	37,651	42,510	47,057	35,961	223	15,656	37,734	42,278	48,403	34,961
Towing Vessel	16	73	112	-	366	166	17	116	148	186	846	308
Other a/	-	-	-	-	-	-	1	8,841	-	-	-	8,841
Total all vessel types	443	5,218	16,339	33,721	45,678	25,075	606	3,923	13,678	31,746	45,970	23,025

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: Bridgeport, CT

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	11	42,053	57,991	72,943	73,786	57,696	36	46,830	69,718	71,908	74,949	62,037
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	1	8,947	-	-	-	8,947
Freight Barges	-	-	-	-	-	-	6	1,182	-	-	-	1,182
General Cargo Vessels	4	6,120	7,118	8,097	8,258	7,398	2	7,051	-	-	-	7,051
Passenger Vessels	-	-	-	-	-	-	4	199	-	-	280	219
Refrigerated Cargo Vessels	61	12,551	-	13,613	-	13,004	67	9,808	-	13,387	15,763	11,747
Ro-Ro Cargo Vessels	10	4,605	-	-	18,324	7,349	-	-	-	-	-	-
Tank Barges	103	2,979	6,159	10,656	19,250	9,458	192	2,787	5,340	11,129	19,233	9,464
Tankers	30	2,521	2,965	34,931	48,353	19,786	52	2,187	-	27,555	72,749	21,779
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	219	3,301	7,967	13,524	32,939	14,150	360	2,295	6,321	13,934	48,333	16,670

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Block Island Sound

ANPR Port Area: Long Island, NY

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	1	39,338	-	-	-	39,338	-	-	-	-	-	-
Combination Carriers	1	66,234	-	-	-	66,234	2	74,868	-	96,027	-	85,448
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	2	1,182	-	1,638	-	1,410	2	1,182	-	-	-	1,182
General Cargo Vessels	1	97	-	-	-	97	-	-	-	-	-	-
Passenger Vessels	30	184	218	281	-	231	32	196	280	281	-	246
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	242	3,694	7,198	9,079	19,645	9,733	586	2,856	6,219	9,292	20,143	9,348
Tankers	153	7,325	52,474	78,203	136,317	62,529	255	770	2,715	45,806	116,848	40,986
Towing Vessel	-	-	-	-	-	-	3	75	118	-	-	104
Other a/	-	-	-	-	-	-	2	7,926	-	8,392	-	8,159
Total all vessel types	430	1,751	7,239	16,082	91,022	27,995	882	1,431	4,850	10,888	58,907	18,285

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Ports of New York/ New Jersey

ANPR Port Area: New York City, NY

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	352	15,060	33,215	42,313	56,615	36,775	392	17,257	34,234	42,806	55,459	37,439
Combination Carriers	42	45,520	70,275	77,113	89,602	69,000	44	49,084	75,407	80,521	98,364	73,025
Containerships	2,408	20,285	37,600	49,049	61,825	42,016	2,496	20,928	38,431	50,778	62,572	42,867
Freight Barges	1	8,210	-	-	-	8,210	1	8,210	-	-	-	8,210
General Cargo Vessels	122	6,334	15,123	31,087	41,375	23,329	67	4,118	10,937	23,136	35,098	18,072
Passenger Vessels	198	2,799	4,676	6,806	9,740	5,850	239	3,447	5,911	9,244	11,884	7,490
Refrigerated Cargo Vessels	24	10,917	13,584	13,613	31,478	17,286	20	10,713	23,775	-	53,393	27,261
Ro-Ro Cargo Vessels	761	10,179	15,444	21,828	46,037	23,065	744	9,789	15,372	20,923	45,989	22,842
Tank Barges	2	10,340	-	28,995	-	19,668	20	4,884	8,209	8,793	14,989	9,160
Tankers	1,422	16,961	38,619	49,777	92,905	49,519	1,625	20,541	40,852	51,344	94,192	51,655
Towing Vessel	19	146	646	846	-	515	20	144	352	846	-	537
Other a/	16	753	2,631	5,186	8,835	4,006	8	366	671	2,159	6,246	2,361
Total all vessel types	5,367	11,536	30,749	45,087	69,366	39,040	5,676	11,969	32,682	46,301	71,028	40,448

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Delaware Bay

ANPR Port Area: Philadelphia, PA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	452	11,148	25,345	37,426	53,818	31,876	324	12,508	26,602	38,727	51,623	32,365
Combination Carriers	31	88,523	-	98,595	149,999	95,738	19	95,171	-	-	136,291	103,828
Containerships	474	4,842	14,493	20,236	39,939	19,727	478	5,179	14,216	23,762	49,127	22,740
Freight Barges	34	8,556	15,960	-	16,634	13,188	16	9,887	16,535	-	-	14,873
General Cargo Vessels	287	6,591	10,288	15,701	31,780	16,035	196	6,166	9,735	14,491	29,291	14,921
Passenger Vessels	8	1,237	4,558	6,732	15,000	6,467	26	3,052	5,013	5,797	9,632	5,536
Refrigerated Cargo Vessels	285	6,915	10,112	14,428	30,382	15,205	406	7,787	10,199	12,655	28,654	14,046
Ro-Ro Cargo Vessels	157	7,397	14,161	17,295	20,634	14,696	150	9,234	14,368	17,124	19,490	14,911
Tank Barges	13	12,700	26,967	44,795	54,586	31,559	11	6,525	13,646	19,217	25,275	14,787
Tankers	952	20,942	57,875	104,728	165,758	87,277	885	26,170	70,432	110,751	170,072	94,142
Towing Vessel	23	152	706	846	1,548	629	17	145	820	846	1,548	556
Other a/	5	816	919	4,819	5,044	2,483	2	816	-	-	-	816
Total all vessel types	2,721	8,072	17,790	37,320	116,767	44,834	2,530	7,649	16,717	39,455	123,194	46,666

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Chesapeake Bay

ANPR Port Area: Hampton Roads, VA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	345	10,561	32,726	47,982	94,882	46,148	324	12,513	35,165	56,606	85,083	47,272
Combination Carriers	16	74,892	77,482	83,039	102,913	81,935	32	67,189	77,447	82,956	102,980	79,436
Containerships	1,719	21,907	40,118	50,208	61,935	43,378	1,721	22,265	39,008	50,442	62,538	43,312
Freight Barges	-	-	-	-	-	-	1	8,210	-	-	-	8,210
General Cargo Vessels	204	5,118	11,138	24,620	37,714	19,357	141	6,543	13,302	24,299	36,072	19,910
Passenger Vessels	22	2,470	5,861	8,075	18,517	7,467	31	3,671	-	9,100	13,622	6,561
Refrigerated Cargo Vessels	10	6,732	12,236	27,904	-	18,419	1	12,206	-	-	-	12,206
Ro-Ro Cargo Vessels	188	11,059	23,436	43,108	52,976	32,421	173	13,357	22,698	43,086	53,031	32,694
Tank Barges	-	-	-	-	-	-	5	13,060	-	-	-	13,060
Tankers	204	13,765	34,081	61,463	101,049	52,589	210	18,421	41,893	63,042	114,372	58,930
Towing Vessel	3	134	-	152	-	140	5	498	928	1,741	1,852	1,103
Other a/	9	712	1,836	2,727	5,049	2,373	14	750	2,516	4,288	24,952	7,199
Total all vessel types	2,720	14,202	34,613	48,162	70,044	41,522	2,658	15,421	35,917	49,239	71,049	42,751

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Chesapeake Bay

ANPR Port Area: Baltimore, MD

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	335	11,073	29,797	64,827	89,436	48,347	320	13,205	34,598	59,172	78,928	46,476
Combination Carriers	5	61,417	75,590	78,488	82,460	71,874	8	38,633	71,959	-	83,155	65,027
Containerships	414	26,042	33,663	43,577	52,387	38,738	380	22,777	33,694	43,241	52,835	37,766
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	235	7,408	16,177	21,694	39,491	20,970	214	8,189	17,215	21,687	40,236	21,575
Passenger Vessels	37	4,526	8,622	-	22,481	8,264	41	3,814	8,550	-	-	7,279
Refrigerated Cargo Vessels	12	6,886	10,416	12,206	12,266	9,846	7	9,360	10,085	12,266	-	10,709
Ro-Ro Cargo Vessels	704	12,410	16,007	21,395	41,187	22,453	694	12,308	15,293	19,428	38,519	21,363
Tank Barges	5	1,451	-	-	-	1,451	6	3,622	14,877	-	-	11,125
Tankers	167	11,584	28,139	41,716	57,611	34,463	203	13,298	40,539	49,983	93,513	48,976
Towing Vessel	16	125	151	846	-	449	14	590	846	-	-	736
Other a/	16	1,966	6,381	8,339	8,969	6,173	26	6,771	8,969	11,683	22,871	11,958
Total all vessel types	1,946	10,211	19,169	33,566	59,713	30,638	1,913	10,471	18,650	35,079	61,643	31,307

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Morehead City and Beaufort, NC

ANPR Port Area: Morehead City, NC

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	18	6,016	19,219	27,350	48,028	23,760	29	15,889	27,723	38,036	61,656	33,509
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	7	3,500	36,895	-	41,949	28,075	15	8,191	24,410	41,600	42,941	28,375
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	12	3,278	6,114	17,683	25,376	13,113	32	3,288	17,006	26,121	31,127	19,386
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	2	4,934	-	7,000	-	5,967
Ro-Ro Cargo Vessels	3	16,157	16,178	-	-	16,171	4	12,487	13,651	-	16,157	13,987
Tank Barges	1	14,078	-	-	-	14,078	-	-	-	-	-	-
Tankers	15	14,282	26,242	29,918	34,450	24,335	42	20,450	28,217	30,610	40,404	29,369
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	2	500	-	2,589	-	1,545
Total all vessel types	56	5,179	16,790	25,630	38,771	21,592	126	8,333	24,599	28,918	44,116	26,367

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Wilmington, NC

ANPR Port Area: Wilmington, NC

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	138	8,515	23,698	31,022	45,508	27,025	113	6,806	24,288	35,590	46,440	27,436
Combination Carriers	7	40,585	-	-	75,466	45,568	8	46,785	-	-	74,928	50,303
Containerships	112	24,437	41,368	51,245	62,757	44,335	98	18,787	39,886	46,302	52,958	38,995
Freight Barges	2	1,747	-	22,419	-	12,083	-	-	-	-	-	-
General Cargo Vessels	132	3,703	12,512	27,035	43,893	21,519	119	5,466	19,091	37,974	45,077	26,690
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	1	6,455	-	-	-	6,455	1	9,340	-	-	-	9,340
Ro-Ro Cargo Vessels	34	8,594	28,682	42,600	-	29,505	27	13,519	35,943	42,600	51,294	33,410
Tank Barges	26	8,214	14,078	19,500	23,551	15,001	18	8,396	19,500	-	23,827	16,280
Tankers	278	9,338	23,301	38,031	51,621	30,273	260	10,394	29,103	41,848	53,665	33,680
Towing Vessel	4	137	150	150	-	147	1	820	-	-	-	820
Other a/	3	133	500	2,589	-	1,074	1	11,957	-	-	-	11,957
Total all vessel types	737	7,354	21,594	37,898	51,564	29,441	646	8,924	26,388	41,105	50,808	31,694

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Georgetown, SC

ANPR Port Area: Georgetown, SC

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	48	7,680	14,693	29,733	45,006	24,278	2	14,100	-	46,664	-	30,382
Combination Carriers	4	47,906	-	-	-	47,906	-	-	-	-	-	-
Containerships	5	19,752	47,359	58,869	60,350	41,216	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	20	7,730	26,630	44,467	46,059	30,276	1	49,770	-	-	-	49,770
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	17,510	-	-	-	17,510	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	78	7,719	18,309	37,719	48,918	28,027	3	14,100	46,664	49,770	-	36,845

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Charleston, SC

ANPR Port Area: Charleston, SC

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	210	16,329	35,657	42,622	60,404	38,572	170	13,833	29,583	40,807	58,084	35,294
Combination Carriers	2	38,300	-	47,906	-	43,103	2	38,633	-	-	-	38,633
Containerships	1,632	26,877	40,578	50,769	60,478	44,570	1,553	28,102	40,313	52,022	61,674	44,949
Freight Barges	1	14,515	-	-	-	14,515	-	-	-	-	-	-
General Cargo Vessels	145	9,160	26,302	40,114	42,613	29,286	98	8,867	27,312	40,984	46,910	30,089
Passenger Vessels	34	1,379	6,271	8,622	21,350	7,205	41	1,948	6,746	8,622	10,774	6,538
Refrigerated Cargo Vessels	5	7,402	8,488	11,720	15,710	10,144	7	6,602	9,046	-	12,206	8,799
Ro-Ro Cargo Vessels	238	12,003	16,305	23,105	33,706	20,797	233	11,960	16,567	20,193	35,083	20,830
Tank Barges	35	21,952	-	24,654	30,643	23,452	18	16,877	23,000	24,654	32,024	21,855
Tankers	182	23,266	40,491	46,078	53,925	40,871	218	31,069	41,790	46,358	56,866	43,440
Towing Vessel	19	128	196	213	874	256	16	146	155	212	820	219
Other a/	7	507	1,160	2,056	5,057	1,693	5	567	1,522	8,264	11,957	4,576
Total all vessel types	2,510	17,113	35,451	45,694	59,384	39,326	2,361	17,271	36,138	45,951	59,891	39,773

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Mid-Atlantic Savannah, GA

ANPR Port Area: Savannah, GA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	275	9,574	21,549	31,377	45,213	26,862	318	9,627	21,125	32,056	44,110	26,508
Combination Carriers	15	31,177	-	46,785	52,342	38,831	14	45,038	-	-	-	45,038
Containerships	1,269	21,585	41,011	49,993	63,420	43,654	1,460	24,978	43,037	53,607	64,034	46,350
Freight Barges	2	1,167	-	-	-	1,167	-	-	-	-	-	-
General Cargo Vessels	286	6,036	14,721	31,311	45,019	24,232	254	5,948	13,108	26,623	45,220	21,914
Passenger Vessels	5	460	1,465	4,558	24,186	6,226	6	398	1,023	3,808	7,180	2,769
Refrigerated Cargo Vessels	8	27,904	-	-	53,328	31,082	9	53,328	53,409	-	-	53,373
Ro-Ro Cargo Vessels	195	11,950	23,474	34,150	43,210	27,659	187	8,116	18,918	31,486	43,259	25,098
Tank Barges	14	8,490	-	24,313	45,314	17,901	4	5,129	9,050	-	19,500	10,682
Tankers	356	13,615	28,373	39,187	56,480	34,289	357	15,971	33,972	40,668	60,586	37,738
Towing Vessel	22	136	149	637	-	367	6	149	846	-	-	614
Other a/	1	11,957	-	-	-	11,957	3	567	2,589	2,865	-	2,007
Total all vessel types	2,448	12,273	30,432	43,534	58,406	36,132	2,618	13,523	34,029	45,559	61,624	38,584

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Southeastern US

ANPR Port Area: Brunswick, GA

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	95	3,091	10,559	26,600	49,709	21,653	88	3,091	9,550	23,004	45,030	19,215
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	33	12,328	33,226	41,100	44,201	31,286	30	21,289	40,850	41,749	66,708	33,475
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	64	8,193	24,185	40,172	44,267	28,442	57	8,794	23,209	40,228	42,484	27,998
Passenger Vessels	-	-	-	-	-	-	1	17	-	-	-	17
Refrigerated Cargo Vessels	9	14,558	-	-	-	14,558	13	9,038	10,140	10,496	15,200	10,662
Ro-Ro Cargo Vessels	335	12,820	15,133	18,455	27,367	18,417	300	12,743	14,706	18,342	27,847	18,285
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	3	8,799	21,683	32,093	-	20,858	5	30,337	-	-	62,460	36,762
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	539	9,240	15,446	21,822	38,422	20,915	494	8,277	14,640	21,041	38,329	20,443

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Southeastern US

ANPR Port Area: Fernandina, FL

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	9	10,493	18,017	41,875	54,355	28,886	9	16,411	40,596	50,655	-	37,005
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	114	4,317	6,743	8,329	12,630	7,315	84	4,894	-	6,850	13,696	7,130
Freight Barges	8	4,025	-	-	5,513	4,211	2	4,025	-	-	-	4,025
General Cargo Vessels	106	3,196	7,144	10,170	39,923	14,110	118	3,160	6,374	10,903	42,139	13,484
Passenger Vessels	2	4,558	-	4,979	-	4,768	2	17	-	4,979	-	2,498
Refrigerated Cargo Vessels	31	13,227	-	13,613	-	13,389	37	10,332	-	13,340	15,100	12,142
Ro-Ro Cargo Vessels	-	-	-	-	-	-	2	3,694	-	51,419	-	27,556
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	2	5,173	-	-	-	5,173
Towing Vessel	9	132	-	-	152	134	11	127	-	-	-	127
Other a/	5	1,836	-	-	8,267	3,122	-	-	-	-	-	-
Total all vessel types	284	3,099	5,841	9,145	26,097	10,791	267	3,731	6,647	10,001	28,492	11,431

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Southeastern US

ANPR Port Area: Jacksonville, FL

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	169	16,990	32,241	47,620	71,158	41,083	182	19,667	36,976	45,402	64,000	40,828
Combination Carriers	4	41,712	47,906	-	-	46,358	5	46,051	-	-	-	46,051
Containerships	572	6,179	17,140	24,246	42,217	21,621	513	4,650	15,560	25,947	43,833	22,117
Freight Barges	204	9,429	13,169	16,413	24,914	15,110	202	11,699	13,169	16,531	19,588	14,283
General Cargo Vessels	302	4,117	5,014	9,604	38,911	13,987	283	3,890	5,246	11,015	35,177	13,111
Passenger Vessels	6	99	-	695	4,979	1,111	16	127	-	4,880	-	2,206
Refrigerated Cargo Vessels	15	5,564	6,426	8,889	15,581	8,683	12	7,946	9,631	10,775	19,095	11,862
Ro-Ro Cargo Vessels	616	12,254	15,328	17,376	24,924	17,420	572	11,849	15,191	17,124	22,470	16,550
Tank Barges	38	16,131	28,756	30,817	48,067	28,949	10	16,960	-	26,615	30,643	22,593
Tankers	266	25,542	40,249	46,316	56,194	41,548	321	24,957	41,175	46,647	55,167	41,865
Towing Vessel	280	147	-	-	544	214	295	150	-	-	253	157
Other a/	8	638	1,142	2,692	4,010	2,120	9	623	-	-	3,745	1,317
Total all vessel types	2,480	2,406	12,841	20,508	44,740	20,120	2,420	1,826	12,629	20,900	45,669	20,235

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Vessel Arrivals by ANPR Region, Port Area, and Average Vessel DWT, 2002-2003

ANPR Region: Southeastern US

ANPR Port Area: Port Canaveral, FL

Vessel Type	2002						2003					
	Vessel Arrivals	Average vessel DWT by quartile (000s)					Vessel Arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	135	5,778	12,266	21,800	38,732	19,377	119	5,259	16,679	29,087	44,994	23,540
Combination Carriers	2	54,500	-	64,850	-	59,675	2	38,633	-	-	-	38,633
Containerships	10	35,686	39,749	41,389	-	38,944	18	3,278	29,437	41,300	59,644	31,519
Freight Barges	6	726	-	5,730	-	3,228	13	726	-	-	3,079	907
General Cargo Vessels	72	5,143	12,573	14,883	34,939	16,124	81	4,312	11,052	15,592	40,029	17,078
Passenger Vessels	450	6,510	8,600	14,357	15,092	11,007	567	4,133	8,600	12,774	14,848	9,327
Refrigerated Cargo Vessels	43	6,107	7,122	8,834	13,307	8,077	49	5,928	6,312	7,470	12,903	7,886
Ro-Ro Cargo Vessels	13	8,126	10,565	12,613	25,785	12,441	38	7,185	12,380	-	23,646	12,495
Tank Barges	2	18,878	-	19,452	-	19,165	3	19,452	20,240	30,352	-	23,348
Tankers	44	30,584	40,032	49,241	72,467	47,553	27	32,308	44,947	54,228	73,730	50,129
Towing Vessel	2	71	-	151	-	111	14	71	-	150	413	150
Other a/	3	664	1,666	2,865	-	1,732	2	500	-	664	-	582
Total all vessel types	782	5,946	9,317	14,700	36,404	15,222	933	2,995	8,292	13,592	33,017	13,309

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Appendix C

VESSEL ARRIVALS BY PORT
AREA AND PROPOSED
RESTRICTED PERIODS

Table C-1. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Total East Coast

Vessel Type	2002						2003					
	Arrivals during restricted periods					Total all arrivals	Arrivals during restricted periods					Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals	Un- restricted		Period 1	Period 2	Restricted Subtotal	% of all arrivals	Un- restricted	
Bulk Carriers	881	296	1,177	38.1%	1,911	3,088	846	307	1,153	37.0%	1,961	3,114
Combination Carriers	37	19	56	38.4%	90	146	36	7	43	25.7%	124	167
Containerships	3,003	913	3,916	43.6%	5,056	8,972	3,111	886	3,997	43.4%	5,218	9,215
Freight Barges	63	10	73	26.2%	206	279	65	9	74	29.4%	178	252
General Cargo Vessels	782	147	929	43.0%	1,230	2,159	595	116	711	37.8%	1,172	1,883
Passenger Vessels	44	134	178	17.0%	867	1,045	65	150	215	18.0%	982	1,197
Refrigerated Cargo Vessels	141	89	230	44.2%	290	520	178	116	294	45.2%	356	650
Ro-Ro Cargo Vessels	1,001	364	1,365	38.9%	2,147	3,512	1,070	301	1,371	39.1%	2,133	3,504
Tank Barges	50	149	199	26.7%	547	746	243	158	401	32.1%	850	1,251
Tankers	1,201	609	1,810	34.0%	3,511	5,321	1,476	666	2,142	37.2%	3,613	5,755
Towing Vessels	105	18	123	29.4%	295	418	151	14	165	35.7%	297	462
Other a/	19	13	32	36.4%	56	88	17	9	26	28.6%	65	91
Total all vessel types	7,327	2,761	10,088	38.4%	16,206	26,294	7,853	2,739	10,592	38.5%	16,949	27,541

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-2. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Eastport, ME

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	19	19	-	-	-	0.0%	16	16
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	0.0%	7	7	-	-	-	0.0%	5	5
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	0.0%	6	6	-	-	-	0.0%	20	20
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	0.0%	32	32	-	-	-	0.0%	41	41

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-3. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Searsport, ME

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un- restricted	Total all arrivals	Arrivals during restricted periods				Un- restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	15	15	-	-	-	0.0%	14	14
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	0.0%	1	1
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	0.0%	1	1	-	-	-	-	-	-
Passenger Vessels	-	-	-	0.0%	56	56	-	-	-	0.0%	67	67
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	0.0%	1	1
Tank Barges	-	-	-	0.0%	64	64	-	-	-	0.0%	24	24
Tankers	-	-	-	0.0%	96	96	-	-	-	0.0%	95	95
Towing Vessels	-	-	-	0.0%	1	1	-	-	-	0.0%	3	3
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	0.0%	234	234	-	-	-	0.0%	205	205

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-4. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Portland, ME

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	107	107	-	-	-	0.0%	319	319
Combination Carriers	-	-	-	0.0%	10	10	-	-	-	0.0%	22	22
Containerships	-	-	-	0.0%	40	40	-	-	-	0.0%	224	224
Freight Barges	-	-	-	0.0%	2	2	-	-	-	0.0%	2	2
General Cargo Vessels	-	-	-	0.0%	28	28	-	-	-	0.0%	85	85
Passenger Vessels	-	-	-	0.0%	24	24	-	-	-	0.0%	21	21
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	0.0%	88	88	-	-	-	0.0%	259	259
Tank Barges	-	-	-	0.0%	15	15	-	-	-	0.0%	29	29
Tankers	-	-	-	0.0%	373	373	-	-	-	0.0%	488	488
Towing Vessels	-	-	-	0.0%	3	3	-	-	-	0.0%	33	33
Other a/	-	-	-	0.0%	4	4	-	-	-	0.0%	8	8
Total all vessel types	-	-	-	0.0%	694	694	-	-	-	0.0%	1,490	1,490

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-5. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Portsmouth, NH

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	50	50	-	-	-	0.0%	67	67
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	0.0%	3	3
Containerships	-	-	-	0.0%	1	1	-	-	-	0.0%	56	56
Freight Barges	-	-	-	0.0%	10	10	-	-	-	-	-	-
General Cargo Vessels	-	-	-	0.0%	5	5	-	-	-	0.0%	10	10
Passenger Vessels	-	-	-	-	-	-	-	-	-	0.0%	1	1
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	0.0%	5	5
Tank Barges	-	-	-	0.0%	20	20	-	-	-	0.0%	2	2
Tankers	-	-	-	0.0%	98	98	-	-	-	0.0%	129	129
Towing Vessels	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
Other a/	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
Total all vessel types	-	-	-	0.0%	187	187	-	-	-	0.0%	277	277

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-6. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Salem, MA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	3	-	3	14.3%	18	21	1	-	1	14.3%	6	7
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	1	-	1	100.0%	-	1
Refrigerated Cargo Vessels	1	-	1	50.0%	1	2	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	0.0%	1	1	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	0.0%	1	1	-	-	-	0.0%	1	1
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	4	-	4	16.0%	21	25	2	-	2	22.2%	7	9

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-7. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Boston, MA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	7	-	7	11.1%	56	63	1	-	1	2.9%	33	34
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	0.0%	1	1
Containerships	18	-	18	12.1%	131	149	14	-	14	18.2%	63	77
Freight Barges	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
General Cargo Vessels	3	-	3	14.3%	18	21	3	-	3	42.9%	4	7
Passenger Vessels	4	-	4	4.4%	87	91	6	-	6	30.0%	14	20
Refrigerated Cargo Vessels	-	-	-	-	-	-	1	-	1	25.0%	3	4
Ro-Ro Cargo Vessels	18	-	18	13.4%	116	134	9	-	9	25.7%	26	35
Tank Barges	1	-	1	50.0%	1	2	-	-	-	-	-	-
Tankers	45	-	45	11.3%	352	397	49	-	49	23.9%	156	205
Towing Vessels	-	-	-	-	-	-	-	-	-	0.0%	1	1
Other a/	1	-	1	50.0%	1	2	1	-	1	25.0%	3	4
Total all vessel types	97	-	97	11.3%	764	861	84	-	84	21.5%	306	390

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-8. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Cape Cod, MA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	0.0%	12	12	-	-	-	0.0%	9	9
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	1	-	1	10.0%	9	10	6	-	6	46.2%	7	13
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	1	-	1	4.3%	22	23	6	-	6	27.3%	16	22

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-9. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: New Bedford, MA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	7	11	18	40.9%	26	44	9	11	20	34.5%	38	58
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	0.0%	1	1
Freight Barges	1	-	1	100.0%	-	1	-	-	-	-	-	-
General Cargo Vessels	9	6	15	45.5%	18	33	4	4	8	30.8%	18	26
Passenger Vessels	-	12	12	41.4%	17	29	-	-	-	-	-	-
Refrigerated Cargo Vessels	8	1	9	81.8%	2	11	-	4	4	36.4%	7	11
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	0.0%	5	5
Tankers	-	2	2	40.0%	3	5	1	2	3	30.0%	7	10
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	2	2	100.0%	-	2	-	-	-	-	-	-
Total all vessel types	25	34	59	47.2%	66	125	14	21	35	31.5%	76	111

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-10. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Providence, RI

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	14	12	26	28.0%	67	93	13	15	28	33.7%	55	83
Combination Carriers	1	1	2	100.0%	-	2	-	-	-	0.0%	2	2
Containerships	1	-	1	100.0%	-	1	-	1	1	50.0%	1	2
Freight Barges	-	-	-	0.0%	1	1	-	-	-	-	-	-
General Cargo Vessels	4	2	6	33.3%	12	18	4	3	7	29.2%	17	24
Passenger Vessels	1	23	24	64.9%	13	37	-	25	25	71.4%	10	35
Refrigerated Cargo Vessels	-	-	-	0.0%	2	2	2	-	2	50.0%	2	4
Ro-Ro Cargo Vessels	3	9	12	36.4%	21	33	15	14	29	36.3%	51	80
Tank Barges	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
Tankers	12	13	25	24.3%	78	103	20	19	39	32.2%	82	121
Towing Vessels	-	-	-	-	-	-	1	-	1	33.3%	2	3
Other a/	2	-	2	33.3%	4	6	-	1	1	100.0%	-	1
Total all vessel types	38	60	98	33.0%	199	297	55	78	133	37.3%	224	357

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-11. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: New London, CT

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	1	2	3	37.5%	5	8	3	5	8	34.8%	15	23
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	0.0%	2	2
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	1	2	3	33.3%	6	9	2	1	3	30.0%	7	10
Passenger Vessels	-	1	1	25.0%	3	4	-	4	4	12.5%	28	32
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	10	10	34.5%	19	29	14	9	23	33.3%	46	69
Tankers	-	1	1	16.7%	5	6	1	1	2	25.0%	6	8
Towing Vessels	-	-	-	-	-	-	-	-	-	0.0%	1	1
Other a/	-	-	-	-	-	-	-	-	-	0.0%	1	1
Total all vessel types	2	16	18	32.1%	38	56	20	20	40	27.4%	106	146

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-12. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: New Haven, CT

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	15	13	28	37.3%	47	75	16	11	27	40.3%	40	67
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
Containerships	1	-	1	20.0%	4	5	-	-	-	0.0%	1	1
Freight Barges	-	-	-	0.0%	4	4	-	2	2	40.0%	3	5
General Cargo Vessels	3	8	11	23.9%	35	46	6	6	12	31.6%	26	38
Passenger Vessels	-	-	-	-	-	-	-	4	4	80.0%	1	5
Refrigerated Cargo Vessels	-	1	1	100.0%	-	1	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	-	1	100.0%	-	1	-	-	-	-	-	-
Tank Barges	1	36	37	27.6%	97	134	35	40	75	30.4%	172	247
Tankers	16	25	41	25.6%	119	160	38	39	77	34.5%	146	223
Towing Vessels	-	6	6	37.5%	10	16	-	5	5	29.4%	12	17
Other a/	-	-	-	-	-	-	-	1	1	100.0%	-	1
Total all vessel types	37	89	126	28.4%	317	443	95	108	203	33.5%	403	606

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-13. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Bridgeport, CT

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	2	-	2	18.2%	9	11	7	7	14	38.9%	22	36
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	0.0%	1	1
Freight Barges	-	-	-	-	-	-	-	3	3	50.0%	3	6
General Cargo Vessels	-	2	2	50.0%	2	4	-	1	1	50.0%	1	2
Passenger Vessels	-	-	-	-	-	-	1	-	1	25.0%	3	4
Refrigerated Cargo Vessels	10	10	20	32.8%	41	61	10	9	19	28.4%	48	67
Ro-Ro Cargo Vessels	1	2	3	30.0%	7	10	-	-	-	-	-	-
Tank Barges	-	29	29	28.2%	74	103	31	27	58	30.2%	134	192
Tankers	2	6	8	26.7%	22	30	10	8	18	34.6%	34	52
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	15	49	64	29.2%	155	219	59	55	114	31.7%	246	360

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-14. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Long Island, NY

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	1	1	-	-	-	-	-	-
Combination Carriers	-	-	-	0.0%	1	1	-	-	-	0.0%	2	2
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	1	1	50.0%	1	2	-	2	2	100.0%	-	2
General Cargo Vessels	-	-	-	0.0%	1	1	-	-	-	-	-	-
Passenger Vessels	-	7	7	23.3%	23	30	3	10	13	40.6%	19	32
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	64	64	26.4%	178	242	93	82	175	29.9%	411	586
Tankers	13	23	36	23.5%	117	153	50	44	94	36.9%	161	255
Towing Vessels	-	-	-	-	-	-	2	1	3	100.0%	-	3
Other a/	-	-	-	-	-	-	-	-	-	0.0%	2	2
Total all vessel types	13	95	108	25.1%	322	430	148	139	287	32.5%	595	882

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-15. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: New York City, NY

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	83	63	146	41.5%	206	352	99	72	171	43.6%	221	392
Combination Carriers	13	4	17	40.5%	25	42	11	5	16	36.4%	28	44
Containerships	547	434	981	40.7%	1,427	2,408	589	417	1,006	40.3%	1,490	2,496
Freight Barges	-	-	-	0.0%	1	1	-	-	-	0.0%	1	1
General Cargo Vessels	49	12	61	50.0%	61	122	18	8	26	38.8%	41	67
Passenger Vessels	5	79	84	42.4%	114	198	4	83	87	36.4%	152	239
Refrigerated Cargo Vessels	7	3	10	41.7%	14	24	2	4	6	30.0%	14	20
Ro-Ro Cargo Vessels	158	150	308	40.5%	453	761	190	119	309	41.5%	435	744
Tank Barges	1	-	1	50.0%	1	2	15	-	15	75.0%	5	20
Tankers	337	240	577	40.6%	845	1,422	461	258	719	44.2%	906	1,625
Towing Vessels	4	3	7	36.8%	12	19	7	4	11	55.0%	9	20
Other a/	2	5	7	43.8%	9	16	-	1	1	12.5%	7	8
Total all vessel types	1,206	993	2,199	41.0%	3,168	5,367	1,396	971	2,367	41.7%	3,309	5,676

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-16. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Philadelphia, PA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	118	100	218	48.2%	234	452	96	76	172	53.1%	152	324
Combination Carriers	5	12	17	54.8%	14	31	6	-	6	31.6%	13	19
Containerships	127	116	243	51.3%	231	474	121	126	247	51.7%	231	478
Freight Barges	4	9	13	38.2%	21	34	1	2	3	18.8%	13	16
General Cargo Vessels	81	66	147	51.2%	140	287	66	44	110	56.1%	86	196
Passenger Vessels	-	5	5	62.5%	3	8	-	16	16	61.5%	10	26
Refrigerated Cargo Vessels	87	71	158	55.4%	127	285	129	98	227	55.9%	179	406
Ro-Ro Cargo Vessels	34	48	82	52.2%	75	157	36	38	74	49.3%	76	150
Tank Barges	-	9	9	69.2%	4	13	10	-	10	90.9%	1	11
Tankers	226	237	463	48.6%	489	952	218	219	437	49.4%	448	885
Towing Vessels	7	6	13	56.5%	10	23	4	3	7	41.2%	10	17
Other a/	-	-	-	0.0%	5	5	-	1	1	50.0%	1	2
Total all vessel types	689	679	1,368	50.3%	1,353	2,721	687	623	1,310	51.8%	1,220	2,530

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-17. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Hampton Roads, VA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	91	48	139	40.3%	206	345	80	57	137	42.3%	187	324
Combination Carriers	3	2	5	31.3%	11	16	8	-	8	25.0%	24	32
Containerships	404	291	695	40.4%	1,024	1,719	422	278	700	40.7%	1,021	1,721
Freight Barges	-	-	-	-	-	-	1	-	1	100.0%	-	1
General Cargo Vessels	58	20	78	38.2%	126	204	35	22	57	40.4%	84	141
Passenger Vessels	2	1	3	13.6%	19	22	2	2	4	12.9%	27	31
Refrigerated Cargo Vessels	2	1	3	30.0%	7	10	1	-	1	100.0%	-	1
Ro-Ro Cargo Vessels	48	31	79	42.0%	109	188	37	25	62	35.8%	111	173
Tank Barges	-	-	-	-	-	-	4	-	4	80.0%	1	5
Tankers	47	40	87	42.6%	117	204	67	40	107	51.0%	103	210
Towing Vessels	-	-	-	0.0%	3	3	1	-	1	20.0%	4	5
Other a/	-	4	4	44.4%	5	9	2	2	4	28.6%	10	14
Total all vessel types	655	438	1,093	40.2%	1,627	2,720	660	426	1,086	40.9%	1,572	2,658

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-18. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Baltimore, MD

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	90	47	137	40.9%	198	335	95	53	148	46.3%	172	320
Combination Carriers	3	-	3	60.0%	2	5	1	2	3	37.5%	5	8
Containerships	104	72	176	42.5%	238	414	95	64	159	41.8%	221	380
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	70	29	99	42.1%	136	235	56	27	83	38.8%	131	214
Passenger Vessels	4	6	10	27.0%	27	37	6	6	12	29.3%	29	41
Refrigerated Cargo Vessels	4	2	6	50.0%	6	12	2	1	3	42.9%	4	7
Ro-Ro Cargo Vessels	152	124	276	39.2%	428	704	215	105	320	46.1%	374	694
Tank Barges	1	1	2	40.0%	3	5	2	-	2	33.3%	4	6
Tankers	47	22	69	41.3%	98	167	53	36	89	43.8%	114	203
Towing Vessels	5	3	8	50.0%	8	16	3	1	4	28.6%	10	14
Other a/	4	2	6	37.5%	10	16	4	3	7	26.9%	19	26
Total all vessel types	484	308	792	40.7%	1,154	1,946	532	298	830	43.4%	1,083	1,913

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-19. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Morehead City, NC

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	7	-	7	38.9%	11	18	10	-	10	34.5%	19	29
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	1	-	1	14.3%	6	7	6	-	6	40.0%	9	15
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	5	-	5	41.7%	7	12	15	-	15	46.9%	17	32
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	1	-	1	50.0%	1	2
Ro-Ro Cargo Vessels	1	-	1	33.3%	2	3	2	-	2	50.0%	2	4
Tank Barges	-	-	-	0.0%	1	1	-	-	-	-	-	-
Tankers	3	-	3	20.0%	12	15	15	-	15	35.7%	27	42
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	2	-	2	100.0%	-	2
Total all vessel types	17	-	17	30.4%	39	56	51	-	51	40.5%	75	126

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-20. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Wilmington, NC

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	64	-	64	46.4%	74	138	52	-	52	46.0%	61	113
Combination Carriers	4	-	4	57.1%	3	7	3	-	3	37.5%	5	8
Containerships	43	-	43	38.4%	69	112	39	-	39	39.8%	59	98
Freight Barges	-	-	-	0.0%	2	2	-	-	-	-	-	-
General Cargo Vessels	62	-	62	47.0%	70	132	51	-	51	42.9%	68	119
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	0.0%	1	1	1	-	1	100.0%	-	1
Ro-Ro Cargo Vessels	13	-	13	38.2%	21	34	10	-	10	37.0%	17	27
Tank Barges	10	-	10	38.5%	16	26	11	-	11	61.1%	7	18
Tankers	112	-	112	40.3%	166	278	106	-	106	40.8%	154	260
Towing Vessels	1	-	1	25.0%	3	4	1	-	1	100.0%	-	1
Other a/	1	-	1	33.3%	2	3	-	-	-	0.0%	1	1
Total all vessel types	310	-	310	42.1%	427	737	274	-	274	42.4%	372	646

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-21. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Georgetown, SC

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	19	-	19	39.6%	29	48	-	-	-	0.0%	2	2
Combination Carriers	-	-	-	0.0%	4	4	-	-	-	-	-	-
Containerships	2	-	2	40.0%	3	5	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	5	-	5	25.0%	15	20	-	-	-	0.0%	1	1
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	-	1	100.0%	-	1	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	27	-	27	34.6%	51	78	-	-	-	0.0%	3	3

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-22. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Charleston, SC

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	113	-	113	53.8%	97	210	107	-	107	62.9%	63	170
Combination Carriers	-	-	-	0.0%	2	2	-	-	-	0.0%	2	2
Containerships	922	-	922	56.5%	710	1,632	908	-	908	58.5%	645	1,553
Freight Barges	1	-	1	100.0%	-	1	-	-	-	-	-	-
General Cargo Vessels	93	-	93	64.1%	52	145	62	-	62	63.3%	36	98
Passenger Vessels	23	-	23	67.6%	11	34	29	-	29	70.7%	12	41
Refrigerated Cargo Vessels	4	-	4	80.0%	1	5	3	-	3	42.9%	4	7
Ro-Ro Cargo Vessels	139	-	139	58.4%	99	238	142	-	142	60.9%	91	233
Tank Barges	21	-	21	60.0%	14	35	17	-	17	94.4%	1	18
Tankers	99	-	99	54.4%	83	182	121	-	121	55.5%	97	218
Towing Vessels	14	-	14	73.7%	5	19	13	-	13	81.3%	3	16
Other a/	5	-	5	71.4%	2	7	2	-	2	40.0%	3	5
Total all vessel types	1,434	-	1,434	57.1%	1,076	2,510	1,404	-	1,404	59.5%	957	2,361

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-23. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Savannah, GA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un- restricted	Total all arrivals	Arrivals during restricted periods				Un- restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	134	-	134	48.7%	141	275	148	-	148	46.5%	170	318
Combination Carriers	6	-	6	40.0%	9	15	7	-	7	50.0%	7	14
Containerships	592	-	592	46.7%	677	1,269	697	-	697	47.7%	763	1,460
Freight Barges	-	-	-	0.0%	2	2	-	-	-	-	-	-
General Cargo Vessels	142	-	142	49.7%	144	286	125	-	125	49.2%	129	254
Passenger Vessels	2	-	2	40.0%	3	5	3	-	3	50.0%	3	6
Refrigerated Cargo Vessels	4	-	4	50.0%	4	8	5	-	5	55.6%	4	9
Ro-Ro Cargo Vessels	97	-	97	49.7%	98	195	82	-	82	43.9%	105	187
Tank Barges	7	-	7	50.0%	7	14	4	-	4	100.0%	-	4
Tankers	156	-	156	43.8%	200	356	153	-	153	42.9%	204	357
Towing Vessels	10	-	10	45.5%	12	22	2	-	2	33.3%	4	6
Other a/	1	-	1	100.0%	-	1	2	-	2	66.7%	1	3
Total all vessel types	1,151	-	1,151	47.0%	1,297	2,448	1,228	-	1,228	46.9%	1,390	2,618

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-24. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Brunswick, GA

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	47	-	47	49.5%	48	95	42	-	42	47.7%	46	88
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	10	-	10	30.3%	23	33	13	-	13	43.3%	17	30
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	34	-	34	53.1%	30	64	25	-	25	43.9%	32	57
Passenger Vessels	-	-	-	-	-	-	1	-	1	100.0%	-	1
Refrigerated Cargo Vessels	4	-	4	44.4%	5	9	6	-	6	46.2%	7	13
Ro-Ro Cargo Vessels	151	-	151	45.1%	184	335	143	-	143	47.7%	157	300
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	2	-	2	66.7%	1	3	4	-	4	80.0%	1	5
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	248	-	248	46.0%	291	539	234	-	234	47.4%	260	494

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-25. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Fernandina, FL

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un-restricted	Total all arrivals	Arrivals during restricted periods				Un-restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	3	-	3	33.3%	6	9	3	-	3	33.3%	6	9
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	42	-	42	36.8%	72	114	40	-	40	47.6%	44	84
Freight Barges	3	-	3	37.5%	5	8	1	-	1	50.0%	1	2
General Cargo Vessels	39	-	39	36.8%	67	106	34	-	34	28.8%	84	118
Passenger Vessels	-	-	-	0.0%	2	2	1	-	1	50.0%	1	2
Refrigerated Cargo Vessels	8	-	8	25.8%	23	31	12	-	12	32.4%	25	37
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	0.0%	2	2
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	0.0%	2	2
Towing Vessels	-	-	-	0.0%	9	9	7	-	7	63.6%	4	11
Other a/	1	-	1	20.0%	4	5	-	-	-	-	-	-
Total all vessel types	96	-	96	33.8%	188	284	98	-	98	36.7%	169	267

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-26. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Jacksonville, FL

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un- restricted	Total all arrivals	Arrivals during restricted periods				Un- restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	63	-	63	37.3%	106	169	64	-	64	35.2%	118	182
Combination Carriers	2	-	2	50.0%	2	4	-	-	-	0.0%	5	5
Containerships	189	-	189	33.0%	383	572	167	-	167	32.6%	346	513
Freight Barges	54	-	54	26.5%	150	204	62	-	62	30.7%	140	202
General Cargo Vessels	124	-	124	41.1%	178	302	89	-	89	31.4%	194	283
Passenger Vessels	3	-	3	50.0%	3	6	8	-	8	50.0%	8	16
Refrigerated Cargo Vessels	2	-	2	13.3%	13	15	3	-	3	25.0%	9	12
Ro-Ro Cargo Vessels	184	-	184	29.9%	432	616	189	-	189	33.0%	383	572
Tank Barges	8	-	8	21.1%	30	38	7	-	7	70.0%	3	10
Tankers	83	-	83	31.2%	183	266	103	-	103	32.1%	218	321
Towing Vessels	64	-	64	22.9%	216	280	110	-	110	37.3%	185	295
Other a/	2	-	2	25.0%	6	8	4	-	4	44.4%	5	9
Total all vessel types	778	-	778	31.4%	1,702	2,480	806	-	806	33.3%	1,614	2,420

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Table C-27. Vessel Arrivals by ANPR Port Area and Proposed Restricted Periods, 2002-2003

ANPR port area: Port Canaveral, FL

Vessel Type	2002						2003					
	Arrivals during restricted periods				Un- restricted	Total all arrivals	Arrivals during restricted periods				Un- restricted	Total all arrivals
	Period 1	Period 2	Restricted Subtotal	% of all arrivals			Period 1	Period 2	Restricted Subtotal	% of all arrivals		
Bulk Carriers	-	-	-	0.0%	135	135	-	-	-	0.0%	119	119
Combination Carriers	-	-	-	0.0%	2	2	-	-	-	0.0%	2	2
Containerships	-	-	-	0.0%	10	10	-	-	-	0.0%	18	18
Freight Barges	-	-	-	0.0%	6	6	-	-	-	0.0%	13	13
General Cargo Vessels	-	-	-	0.0%	72	72	-	-	-	0.0%	81	81
Passenger Vessels	-	-	-	0.0%	450	450	-	-	-	0.0%	567	567
Refrigerated Cargo Vessels	-	-	-	0.0%	43	43	-	-	-	0.0%	49	49
Ro-Ro Cargo Vessels	-	-	-	0.0%	13	13	-	-	-	0.0%	38	38
Tank Barges	-	-	-	0.0%	2	2	-	-	-	0.0%	3	3
Tankers	-	-	-	0.0%	44	44	-	-	-	0.0%	27	27
Towing Vessels	-	-	-	0.0%	2	2	-	-	-	0.0%	14	14
Other a/	-	-	-	0.0%	3	3	-	-	-	0.0%	2	2
Total all vessel types	-	-	-	0.0%	782	782	-	-	-	0.0%	933	933

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Appendix D

RESTRICTED PERIOD
VESSEL ARRIVALS BY PORT
AREA AND AVERAGE VESSEL
DWT

Table D-1. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Total East Coast

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	1,177	11,102	26,559	39,755	65,487	35,594	1,153	12,518	29,515	41,859	65,191	37,168
Combination Carriers	56	37,403	69,867	89,858	108,876	73,087	43	44,904	70,818	78,705	99,875	71,083
Containerships	3,916	16,761	35,172	47,057	60,749	39,858	3,997	17,606	37,140	48,929	61,999	41,368
Freight Barges	73	4,883	11,980	15,140	23,292	12,585	74	5,725	13,088	16,533	16,634	12,374
General Cargo Vessels	929	4,886	11,749	25,095	42,657	21,041	711	4,582	10,625	21,578	41,335	19,413
Passenger Vessels	178	1,409	4,602	7,437	10,750	5,906	215	796	5,144	7,742	11,094	5,901
Refrigerated Cargo Vessels	230	6,686	10,306	13,967	27,145	14,057	294	7,880	10,353	12,219	26,538	14,115
Ro-Ro Cargo Vessels	1,365	11,024	15,570	20,620	39,405	21,390	1,371	11,134	15,413	19,224	37,990	20,865
Tank Barges	199	4,199	8,083	15,219	27,161	13,239	401	3,222	6,533	10,964	21,388	10,500
Tankers	1,810	15,433	37,603	52,008	115,175	54,876	2,142	16,226	39,497	52,872	116,404	56,109
Towing Vessels	123	122	151	211	848	319	165	146	-	-	609	253
Other a/	32	399	2,015	5,178	8,624	3,848	26	599	1,686	6,744	20,178	5,558
Total all vessel types	10,088	8,822	23,581	40,852	68,928	35,502	10,592	8,066	23,953	41,931	71,328	36,309

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-2. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Eastport, ME

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-3. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Searsport, ME

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-4. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Portland, ME

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-5. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Portsmouth, NH

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-6. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Salem, MA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	3	37,300	41,100	41,755	-	40,052	1	41,755	-	-	-	41,755
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	1	3,780	-	-	-	3,780
Refrigerated Cargo Vessels	1	7,102	-	-	-	7,102	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	4	7,102	37,300	41,100	41,755	31,814	2	3,780	-	41,755	-	22,768

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-7. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Boston, MA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	7	12,393	17,970	18,172	52,640	21,387	1	18,314	-	-	-	18,314
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	18	24,230	35,520	43,208	51,617	38,096	14	16,712	44,184	48,888	51,983	39,014
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	3	8,340	-	38,631	-	18,437	3	1,864	2,740	13,162	-	5,922
Passenger Vessels	4	6,911	7,202	-	-	7,129	6	4,000	5,030	7,202	8,155	5,931
Refrigerated Cargo Vessels	-	-	-	-	-	-	1	7,368	-	-	-	7,368
Ro-Ro Cargo Vessels	18	4,367	11,662	14,847	19,449	11,035	9	4,294	-	-	14,930	6,657
Tank Barges	1	6,247	-	-	-	6,247	-	-	-	-	-	-
Tankers	45	29,978	37,378	42,874	58,029	41,303	49	29,359	38,449	41,327	104,331	51,346
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	6,864	-	-	-	6,864	1	518	-	-	-	518
Total all vessel types	97	7,641	26,065	37,980	52,564	30,821	84	5,956	31,845	41,008	79,245	38,115

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-8. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Cape Cod, MA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	1	69,871	-	-	-	69,871	6	59,586	65,034	67,026	75,500	65,626
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	1	69,871	-	-	-	69,871	6	59,586	65,034	67,026	75,500	65,626

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-9. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: New Bedford, MA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	18	38,162	-	41,100	57,547	42,633	20	34,523	38,747	60,452	72,026	49,435
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	1	24,103	-	-	-	24,103	-	-	-	-	-	-
General Cargo Vessels	15	1,201	3,896	10,400	23,500	8,653	8	3,266	6,654	9,684	17,617	9,305
Passenger Vessels	12	15	15	7,700	-	3,858	-	-	-	-	-	-
Refrigerated Cargo Vessels	9	6,099	-	6,116	6,489	6,148	4	6,455	6,522	7,102	8,147	7,057
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	2	10,530	-	22,780	-	16,655	3	12,748	13,947	14,170	-	13,622
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	47	-	149	-	98	-	-	-	-	-	-
Total all vessel types	59	791	6,715	29,960	54,257	17,905	35	6,195	18,787	40,465	67,902	32,349

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-10. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Providence, RI

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	26	19,082	32,071	35,338	39,724	30,717	28	17,476	32,200	38,604	44,780	33,036
Combination Carriers	2	54,502	-	76,324	-	65,413	-	-	-	-	-	-
Containerships	1	17,914	-	-	-	17,914	1	7,802	-	-	-	7,802
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	6	1,403	9,790	11,566	22,526	9,709	7	10,329	11,076	20,634	37,614	17,278
Passenger Vessels	24	1,267	4,318	6,428	9,710	5,255	25	1,945	6,251	6,911	9,131	5,842
Refrigerated Cargo Vessels	-	-	-	-	-	-	2	6,347	-	6,413	-	6,380
Ro-Ro Cargo Vessels	12	13,674	17,424	19,965	30,489	20,388	29	12,779	14,217	15,900	18,883	15,295
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	25	9,724	30,563	38,495	52,792	31,395	39	21,879	38,299	43,972	58,672	39,868
Towing Vessels	-	-	-	-	-	-	1	150	-	-	-	150
Other a/	2	2,118	-	-	-	2,118	1	567	-	-	-	567
Total all vessel types	98	3,638	13,541	27,799	43,942	22,097	133	5,392	14,113	30,890	46,766	24,148

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-11. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: New London, CT

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	3	14,873	47,034	52,675	-	38,194	8	17,662	39,260	44,588	47,048	37,140
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	3	16,957	19,333	34,507	-	23,599	3	38,715	40,235	45,603	-	41,518
Passenger Vessels	1	7,700	-	-	-	7,700	4	218	-	-	-	218
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	10	2,164	6,187	7,415	16,275	7,243	23	3,627	4,621	6,326	13,876	6,818
Tankers	1	33,288	-	-	-	33,288	2	19,228	-	47,358	-	33,293
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	18	4,175	7,510	16,743	41,876	16,600	40	2,263	5,474	15,492	43,370	16,149

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-12. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: New Haven, CT

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	28	19,634	30,922	44,264	53,072	36,659	27	24,344	30,146	44,629	58,713	38,530
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	1	29,519	-	-	-	29,519	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	2	1,182	-	16,537	-	8,859
General Cargo Vessels	11	7,976	21,079	29,516	46,312	23,627	12	14,602	14,883	22,150	43,814	23,862
Passenger Vessels	-	-	-	-	-	-	4	199	218	-	-	213
Refrigerated Cargo Vessels	1	13,613	-	-	-	13,613	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	15,092	-	-	-	15,092	-	-	-	-	-	-
Tank Barges	37	5,599	8,083	11,399	19,012	10,743	75	3,391	6,794	11,370	19,536	10,088
Tankers	41	7,868	35,061	42,604	46,745	32,354	77	4,916	34,891	41,412	49,381	31,979
Towing Vessels	6	105	-	-	-	105	5	117	846	-	-	555
Other a/	-	-	-	-	-	-	1	8,841	-	-	-	8,841
Total all vessel types	126	4,448	14,643	32,366	46,933	24,359	203	2,897	11,489	29,509	47,096	22,541

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-13. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Bridgeport, CT

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	2	57,991	-	71,717	-	64,854	14	49,463	69,578	72,219	75,174	64,137
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	3	1,182	-	-	-	1,182
General Cargo Vessels	2	7,118	-	8,258	-	7,688	1	7,051	-	-	-	7,051
Passenger Vessels	-	-	-	-	-	-	1	199	-	-	-	199
Refrigerated Cargo Vessels	20	13,297	-	13,613	-	13,439	19	10,713	11,021	13,584	13,613	12,091
Ro-Ro Cargo Vessels	3	4,605	-	18,293	-	9,168	-	-	-	-	-	-
Tank Barges	29	4,627	7,285	12,839	19,407	10,727	58	3,100	6,556	11,345	18,646	9,468
Tankers	8	2,651	-	33,288	37,544	15,204	18	2,396	-	-	70,783	17,593
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	64	4,007	10,742	13,613	28,643	13,657	114	2,403	8,077	13,648	49,080	17,581

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-14. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Long Island, NY

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	1	1,182	-	-	-	1,182	2	1,182	-	-	-	1,182
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	7	154	218	281	-	218	13	199	259	281	-	251
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	64	2,901	7,060	9,848	19,981	9,774	175	2,846	5,713	8,694	21,083	9,436
Tankers	36	1,378	36,793	79,608	144,305	61,927	94	774	7,245	61,342	126,260	47,168
Towing Vessels	-	-	-	-	-	-	3	75	118	-	-	104
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	108	1,466	6,684	16,901	93,457	26,459	287	1,291	4,498	12,440	73,556	21,223

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-15. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: New York City, NY

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	146	14,951	32,871	41,628	56,888	36,351	171	17,207	35,084	43,122	57,136	38,026
Combination Carriers	17	55,367	75,067	76,562	87,214	70,697	16	49,871	74,898	76,059	90,955	71,309
Containerships	981	19,672	36,959	48,811	61,698	41,527	1,006	21,195	38,549	51,420	62,988	43,315
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	61	7,057	18,563	33,425	43,172	24,932	26	4,590	8,727	24,982	36,522	18,404
Passenger Vessels	84	2,680	5,110	7,626	10,284	6,246	87	3,016	5,998	9,619	12,093	7,475
Refrigerated Cargo Vessels	10	11,131	13,584	13,613	14,173	12,916	6	10,713	12,320	26,863	53,409	23,480
Ro-Ro Cargo Vessels	308	10,147	15,072	21,004	44,147	22,561	309	10,484	15,815	22,049	47,016	23,434
Tank Barges	1	28,995	-	-	-	28,995	15	5,242	8,188	8,793	11,230	7,929
Tankers	577	16,935	38,448	49,607	92,394	49,270	719	18,278	40,290	51,456	92,469	50,451
Towing Vessels	7	148	-	837	-	444	11	144	773	-	-	601
Other a/	7	2,520	4,819	5,278	-	4,030	1	919	-	-	-	919
Total all vessel types	2,199	11,398	30,054	44,454	68,509	38,590	2,367	11,858	32,892	46,533	71,219	40,613

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-16. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Philadelphia, PA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	218	10,905	25,388	37,441	54,912	32,088	172	14,398	28,264	38,139	50,016	32,566
Combination Carriers	17	94,954	-	98,595	149,999	99,049	6	98,595	-	-	-	98,595
Containerships	243	5,222	14,827	20,432	39,998	19,855	247	5,201	14,326	24,028	48,684	22,771
Freight Barges	13	8,157	16,056	-	16,634	13,062	3	9,887	16,537	-	-	14,320
General Cargo Vessels	147	6,754	10,215	14,793	30,711	15,492	110	6,473	9,986	14,347	28,134	14,545
Passenger Vessels	5	2,669	4,979	8,572	21,428	8,063	16	2,967	5,004	5,555	9,786	5,574
Refrigerated Cargo Vessels	158	6,682	9,842	13,982	29,636	14,461	227	7,937	10,274	12,117	25,548	13,779
Ro-Ro Cargo Vessels	82	7,340	14,206	17,281	20,813	14,677	74	8,764	14,687	17,285	19,800	15,009
Tank Barges	9	13,693	32,671	47,247	54,586	33,638	10	6,525	12,735	17,779	19,500	13,738
Tankers	463	21,503	58,276	104,158	166,216	87,170	437	28,211	71,545	112,186	172,204	95,744
Towing Vessels	13	152	479	836	1,548	573	7	134	707	-	-	544
Other a/	-	-	-	-	-	-	1	816	-	-	-	816
Total all vessel types	1,368	7,658	17,118	36,465	115,123	43,969	1,310	7,656	16,532	38,275	120,711	45,626

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-17. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Hampton Roads, VA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	139	11,490	32,212	49,045	89,452	44,871	137	12,433	34,581	60,799	86,237	48,249
Combination Carriers	5	75,576	82,460	83,155	96,027	82,559	8	74,868	77,598	-	96,477	81,635
Containerships	695	22,102	39,809	50,476	62,023	43,355	700	21,905	39,416	51,321	62,494	43,626
Freight Barges	-	-	-	-	-	-	1	8,210	-	-	-	8,210
General Cargo Vessels	78	5,142	10,783	26,834	38,820	20,076	57	5,948	12,638	24,279	33,584	18,881
Passenger Vessels	3	780	6,911	7,202	-	4,964	4	371	6,653	11,778	14,406	8,302
Refrigerated Cargo Vessels	3	7,070	27,904	-	-	20,959	1	12,206	-	-	-	12,206
Ro-Ro Cargo Vessels	79	11,931	24,109	43,998	52,486	32,779	62	14,085	22,774	40,186	52,408	32,195
Tank Barges	-	-	-	-	-	-	4	14,877	-	-	-	14,877
Tankers	87	14,972	39,911	71,427	105,233	57,342	107	17,334	40,784	62,480	110,496	56,672
Towing Vessels	-	-	-	-	-	-	1	1,852	-	-	-	1,852
Other a/	4	567	775	793	2,865	1,250	4	775	2,589	2,795	31,450	9,402
Total all vessel types	1,093	15,200	35,019	48,565	69,834	42,094	1,086	15,960	36,030	50,208	71,586	43,361

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-18. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Baltimore, MD

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	137	11,215	29,149	63,739	91,332	47,990	148	14,958	37,056	59,781	76,995	46,890
Combination Carriers	3	47,906	75,590	82,460	-	68,652	3	38,633	76,324	-	-	63,760
Containerships	176	24,270	32,849	42,801	52,434	37,815	159	21,601	33,544	43,340	52,462	37,357
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	99	7,714	17,113	22,242	40,530	21,608	83	7,464	16,760	21,441	36,121	20,258
Passenger Vessels	10	7,833	-	-	-	7,833	12	7,932	8,622	-	-	8,450
Refrigerated Cargo Vessels	6	7,070	-	11,487	12,266	9,408	3	12,266	-	-	-	12,266
Ro-Ro Cargo Vessels	276	12,532	15,891	20,831	40,298	22,388	320	12,289	15,229	19,409	38,936	21,283
Tank Barges	2	1,451	-	-	-	1,451	2	5,794	-	14,877	-	10,335
Tankers	69	11,386	30,497	45,592	65,253	37,509	89	20,221	45,821	58,785	107,354	57,333
Towing Vessels	8	125	152	846	-	406	4	146	846	-	-	671
Other a/	6	5,278	8,264	8,339	-	7,306	7	8,264	8,339	8,969	31,450	11,709
Total all vessel types	792	10,289	19,336	33,908	60,488	30,968	830	11,044	19,188	35,874	63,781	32,420

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-19. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Morehead City, NC

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	7	6,569	23,158	27,649	48,093	23,264	10	11,252	23,158	27,266	50,337	26,254
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	1	41,600	-	-	-	41,600	6	3,188	22,778	37,510	-	23,614
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	5	7,020	14,883	15,985	25,317	14,045	15	2,739	7,960	23,539	30,005	15,131
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	1	4,934	-	-	-	4,934
Ro-Ro Cargo Vessels	1	16,157	-	-	-	16,157	2	13,651	-	16,157	-	14,904
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	3	12,467	28,217	-	-	22,967	15	22,736	28,185	30,824	45,207	30,488
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	2	500	-	2,589	-	1,545
Total all vessel types	17	7,929	18,668	27,051	39,512	21,160	51	3,718	18,866	27,561	39,538	22,085

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-20. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Wilmington, NC

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	64	9,657	24,100	30,173	43,662	26,898	52	9,030	25,582	37,073	49,461	29,968
Combination Carriers	4	9,587	46,785	-	75,466	44,656	3	46,785	-	74,928	-	56,166
Containerships	43	30,252	42,343	54,614	62,747	46,567	39	16,781	40,209	48,376	56,358	39,404
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	62	3,236	12,428	28,112	43,962	21,732	51	4,068	14,855	32,734	44,689	23,682
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	1	9,340	-	-	-	9,340
Ro-Ro Cargo Vessels	13	8,977	29,591	42,600	-	28,251	10	14,841	39,122	42,600	51,294	34,098
Tank Barges	10	8,030	-	14,078	19,500	12,138	11	9,050	19,500	-	24,654	16,169
Tankers	112	8,994	22,624	38,009	52,361	30,119	106	9,812	26,848	40,953	51,634	32,080
Towing Vessels	1	137	-	-	-	137	1	820	-	-	-	820
Other a/	1	133	-	-	-	133	-	-	-	-	-	-
Total all vessel types	310	7,567	22,044	37,708	51,599	29,394	274	7,973	24,118	39,968	50,778	30,660

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-21. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Georgetown, SC

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	19	11,171	16,400	31,829	49,941	25,320	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	2	47,359	-	58,869	-	53,114	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	5	8,214	44,389	-	44,946	30,030	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	1	17,510	-	-	-	17,510	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	27	10,579	21,514	39,061	51,205	27,962	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-22. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Charleston, SC

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	113	14,510	35,438	43,606	62,258	38,665	107	14,362	27,995	40,177	59,567	34,684
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	922	26,574	40,147	50,772	60,445	44,378	908	28,239	40,776	52,850	62,061	45,139
Freight Barges	1	14,515	-	-	-	14,515	-	-	-	-	-	-
General Cargo Vessels	93	9,589	25,922	39,461	42,440	28,963	62	10,780	27,956	40,210	46,799	30,224
Passenger Vessels	23	1,166	5,720	8,622	20,259	6,806	29	2,159	7,085	8,622	10,774	6,510
Refrigerated Cargo Vessels	4	8,399	8,488	11,720	15,710	11,079	3	6,489	6,715	12,206	-	8,470
Ro-Ro Cargo Vessels	139	12,192	16,024	22,913	34,143	21,062	142	12,572	16,888	20,532	34,989	21,001
Tank Barges	21	21,546	-	24,654	30,352	23,149	17	16,877	24,470	-	32,024	21,788
Tankers	99	28,134	41,151	46,509	54,447	42,280	121	30,546	42,233	46,461	58,096	43,738
Towing Vessels	14	173	-	213	874	287	13	149	171	213	820	230
Other a/	5	507	-	1,160	5,057	1,548	2	567	-	1,522	-	1,045
Total all vessel types	1,434	16,308	34,918	45,724	59,400	38,916	1,404	16,534	35,662	45,792	60,229	39,484

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-23. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Savannah, GA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	134	9,146	20,663	30,155	45,796	26,253	148	9,718	21,802	30,337	44,096	26,325
Combination Carriers	6	9,277	38,633	46,785	-	31,565	7	38,633	46,785	-	-	44,456
Containerships	592	21,328	39,665	48,906	63,156	43,028	697	23,432	42,751	53,761	64,274	45,960
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	142	6,098	18,098	34,874	45,351	25,879	125	4,847	11,185	22,621	44,894	20,373
Passenger Vessels	2	780	-	24,186	-	12,483	3	17	780	1,023	-	607
Refrigerated Cargo Vessels	4	27,904	-	-	53,328	34,260	5	53,328	53,409	-	-	53,377
Ro-Ro Cargo Vessels	97	11,431	21,822	33,194	43,100	27,018	82	7,976	18,825	29,740	42,078	24,212
Tank Barges	7	7,743	14,078	19,500	45,314	17,374	4	5,129	9,050	-	19,500	10,682
Tankers	156	14,035	29,804	40,093	59,135	35,701	153	15,983	34,725	41,184	58,890	37,438
Towing Vessels	10	139	150	568	-	355	2	150	-	846	-	498
Other a/	1	11,957	-	-	-	11,957	2	2,589	-	2,865	-	2,727
Total all vessel types	1,151	12,436	29,781	43,406	58,350	35,920	1,228	12,516	32,980	46,017	61,724	38,127

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-24. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Brunswick, GA

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	47	3,091	11,940	25,760	49,244	20,687	42	3,091	8,621	25,104	46,515	19,722
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	10	13,631	35,686	40,850	41,749	31,315	13	30,874	40,850	41,749	-	37,290
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	34	11,268	26,657	39,684	41,945	29,176	25	8,043	22,807	40,061	42,560	26,273
Passenger Vessels	-	-	-	-	-	-	1	17	-	-	-	17
Refrigerated Cargo Vessels	4	10,447	15,200	-	-	14,012	6	9,989	10,140	-	10,447	10,141
Ro-Ro Cargo Vessels	151	12,721	15,231	18,189	26,437	17,982	143	12,910	14,865	18,351	28,252	17,991
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	2	8,799	-	32,093	-	20,446	4	25,380	31,990	-	-	30,337
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	248	9,051	15,354	21,521	37,390	20,523	234	8,497	14,736	20,326	37,620	20,191

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-25. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Fernandina, FL

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	3	14,828	16,883	57,245	-	29,652	3	38,695	50,655	-	-	46,668
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	42	4,151	6,592	8,329	9,197	6,506	40	4,860	-	7,484	17,755	7,390
Freight Barges	3	4,025	-	-	-	4,025	1	4,025	-	-	-	4,025
General Cargo Vessels	39	3,197	8,946	9,405	39,282	13,263	34	3,062	6,464	12,030	43,212	15,083
Passenger Vessels	-	-	-	-	-	-	1	17	-	-	-	17
Refrigerated Cargo Vessels	8	13,304	-	-	13,613	13,342	12	12,764	-	13,613	-	13,118
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	7	98	134	-	-	123
Other a/	1	8,267	-	-	-	8,267	-	-	-	-	-	-
Total all vessel types	96	3,458	5,943	8,901	25,902	10,485	98	2,080	5,621	10,507	32,423	11,334

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-26. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Jacksonville, FL

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	63	14,815	30,784	41,616	66,109	37,465	64	18,834	39,107	46,050	63,353	40,560
Combination Carriers	2	41,712	-	47,906	-	44,809	-	-	-	-	-	-
Containerships	189	5,985	16,969	22,010	40,048	20,498	167	6,355	17,171	26,080	43,084	21,765
Freight Barges	54	5,592	12,578	13,943	20,104	12,907	62	11,148	13,169	16,532	16,634	13,497
General Cargo Vessels	124	4,219	5,461	15,646	42,724	16,205	89	4,101	5,742	12,472	40,144	14,725
Passenger Vessels	3	17	695	-	-	469	8	120	-	-	6,313	1,668
Refrigerated Cargo Vessels	2	5,418	-	-	-	5,418	3	9,583	-	10,085	-	9,750
Ro-Ro Cargo Vessels	184	11,910	15,086	17,221	24,143	16,989	189	11,031	14,711	16,886	22,005	16,050
Tank Barges	8	9,050	14,325	25,275	30,368	19,754	7	19,500	-	30,077	30,933	24,155
Tankers	83	20,573	39,783	46,211	51,309	39,326	103	21,593	39,306	45,279	55,539	40,011
Towing Vessels	64	122	151	-	757	267	110	149	-	-	287	162
Other a/	2	1,522	-	5,155	-	3,339	4	659	-	-	-	659
Total all vessel types	778	3,166	12,918	20,790	43,776	20,070	806	1,459	12,095	20,280	44,990	19,559

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table D-27. Restricted Period Vessel Arrivals by ANPR Port Area and Average Vessel DWT by Quartile, 2002-2003

ANPR port area: Port Canaveral, FL

Vessel Type	2002						2003					
	Restricted period vessel arrivals	Average vessel DWT by quartile (000s)					Restricted period vessel arrivals	Average vessel DWT by quartile (000s)				
		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average		Bottom 25%	Second 25%	Third 25%	Top 25%	Overall average
Bulk Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carriers	-	-	-	-	-	-	-	-	-	-	-	-
Containerships	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barges	-	-	-	-	-	-	-	-	-	-	-	-
General Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barges	-	-	-	-	-	-	-	-	-	-	-	-
Tankers	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessels	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-
Total all vessel types	-	-	-	-	-	-	-	-	-	-	-	-

a/ Includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Appendix E

U.S. AND FOREIGN FLAG
VESSEL ARRIVALS BY PORT
AREA, VESSEL TYPE AND
SIZE

Table E-1. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Total East Coast

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	7	-	-	-	-	-	4	16	-	7	-	-	-	-	-	-	-	-	34
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	6	-	-	39	64	6	58	27	82	27	105	22	-	-	-	-	-	-	436
Freight Barge	14	11	23	21	2	-	-	-	-	-	1	-	-	-	-	-	-	-	72
General Dry Cargo Ship	1	-	1	1	12	3	-	1	1	-	-	-	-	-	-	-	-	-	20
Passenger Ship	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	-	4	92	20	19	2	-	-	-	-	-	-	-	-	-	-	-	138
Tank Barge	29	68	26	26	30	5	3	-	-	4	1	-	-	-	-	-	-	-	192
Tank Ship	74	-	-	12	-	-	28	69	37	25	1	-	-	-	-	-	-	-	246
Towing Vessel	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120
Other a/	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Total	280	82	54	191	128	33	95	113	120	63	108	22	-	-	-	-	-	-	1,289
<u>2002 Total arrivals</u>																			
Bulk Carrier	15	6	-	-	-	-	12	53	-	12	-	-	-	-	2	-	-	-	100
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	16	-	-	94	158	31	117	57	155	61	201	50	-	-	-	-	-	-	940
Freight Barge	46	29	94	88	11	-	1	-	-	-	8	-	-	-	-	-	-	-	277
General Dry Cargo Ship	9	4	2	1	14	6	-	1	1	-	-	-	-	-	-	-	-	-	38
Passenger Ship	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	4	4	14	238	60	38	2	-	-	-	-	-	-	-	-	-	-	-	360
Tank Barge	103	286	119	113	71	13	11	-	-	15	1	-	-	-	-	-	-	-	732
Tank Ship	199	-	-	53	-	-	62	188	74	85	1	-	-	-	-	-	-	-	662
Towing Vessel	413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	413
Other a/	27	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Total	902	335	229	587	314	88	205	299	230	173	211	50	-	-	2	-	-	-	3,625
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	6	1	-	-	-	-	-	11	-	3	-	1	-	-	-	-	-	-	22
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	7	-	-	20	29	24	61	23	79	32	88	38	-	-	-	-	-	-	401
Freight Barge	9	9	30	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73
General Dry Cargo Ship	-	-	1	-	1	7	2	-	-	-	-	-	-	-	-	-	-	-	11
Passenger Ship	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	2	3	72	31	10	3	-	-	-	-	-	-	-	-	-	-	-	122
Tank Barge	102	150	36	61	43	1	3	-	-	-	-	-	-	-	-	-	-	-	396
Tank Ship	140	-	-	17	-	-	37	66	32	34	-	-	-	-	-	-	-	-	326
Towing Vessel	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161
Other a/	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Total	472	162	70	195	104	42	106	100	111	69	88	39	-	-	-	-	-	-	1,558
<u>2003 Total arrivals</u>																			
Bulk Carrier	13	4	-	-	-	4	15	33	-	5	-	3	-	-	1	-	-	-	78
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	16	-	-	65	91	71	149	50	153	62	171	85	-	-	-	-	-	-	913
Freight Barge	33	18	107	89	1	-	1	-	-	-	1	-	-	-	-	-	-	-	250
General Dry Cargo Ship	5	2	6	3	4	21	7	-	-	-	-	-	-	-	-	-	-	-	48
Passenger Ship	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	5	9	9	185	71	23	7	-	-	-	-	-	-	-	-	-	-	-	309
Tank Barge	314	472	147	193	102	3	4	-	-	2	-	-	-	-	-	-	-	-	1,237
Tank Ship	335	-	-	40	-	-	97	170	99	106	13	-	-	-	-	-	1	-	861
Towing Vessel	441	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	441
Other a/	32	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
Total	1,293	509	269	575	269	122	280	253	252	175	185	88	-	-	1	-	1	-	4,272

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-2. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Total East Coast

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	28	96	87	116	64	124	105	108	109	93	45	63	84	4	1	2	8	6	1,143
Combination Carrier (e.g. OBO)	-	3	-	-	-	-	-	2	1	8	3	2	13	6	17	-	1	-	56
Container Ship	102	130	127	156	225	193	398	205	416	441	666	421	-	-	-	-	-	-	3,480
Freight Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	131	184	102	90	65	67	31	68	121	50	-	-	-	-	-	-	-	-	909
Passenger Ship	65	84	6	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	160
Refrigerated Cargo Ship	6	78	82	24	4	8	26	-	-	-	2	-	-	-	-	-	-	-	230
Ro-Ro Cargo Ship	44	23	401	294	135	111	31	26	65	9	88	-	-	-	-	-	-	-	1,227
Tank Barge	-	6	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	7
Tank Ship	6	32	121	86	45	92	68	149	130	205	61	144	41	34	152	52	91	55	1,564
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	8	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Total	393	646	928	767	542	595	660	558	842	806	865	630	138	44	170	54	100	61	8,799
<u>2002 Total arrivals</u>																			
Bulk Carrier	66	245	250	320	165	309	233	326	301	225	112	160	225	10	1	2	20	18	2,988
Combination Carrier (e.g. OBO)	-	6	-	-	-	-	-	8	1	26	11	7	31	13	31	10	2	-	146
Container Ship	245	327	303	349	487	368	880	486	1,069	988	1,558	972	-	-	-	-	-	-	8,032
Freight Barge	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	323	457	290	184	177	117	68	127	268	110	-	-	-	-	-	-	-	-	2,121
Passenger Ship	202	510	195	56	12	-	-	-	-	-	-	-	-	-	-	-	-	-	975
Refrigerated Cargo Ship	7	185	198	46	7	19	51	-	-	-	7	-	-	-	-	-	-	-	520
Ro-Ro Cargo Ship	175	82	985	768	343	256	81	65	153	24	218	1	1	-	-	-	-	-	3,152
Tank Barge	-	13	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	14
Tank Ship	11	101	357	230	108	261	278	592	428	572	158	394	104	63	454	202	207	139	4,659
Towing Vessel	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Other a/	31	23	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55
Total	1,066	1,949	2,580	1,953	1,299	1,330	1,592	1,604	2,220	1,945	2,064	1,534	361	86	486	214	229	157	####
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	29	71	61	105	54	132	84	129	125	112	54	61	98	9	-	2	3	2	1,131
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	3	-	10	2	-	16	3	8	1	-	-	43
Container Ship	77	172	141	151	160	88	442	295	434	321	793	513	-	9	-	-	-	-	3,596
Freight Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	101	159	97	77	52	31	38	31	69	45	-	-	-	-	-	-	-	-	700
Passenger Ship	43	107	29	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180
Refrigerated Cargo Ship	4	71	159	22	2	2	23	-	-	-	11	-	-	-	-	-	-	-	294
Ro-Ro Cargo Ship	42	22	395	385	119	84	10	25	86	2	79	-	-	-	-	-	-	-	1,249
Tank Barge	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Ship	7	31	82	63	41	90	57	220	185	285	44	215	64	20	158	71	95	88	1,816
Towing Vessel	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Other a/	6	7	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	15
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	66	201	176	252	195	391	202	335	367	299	147	136	237	15	-	2	11	4	3,036
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	17	1	30	11	-	39	18	26	23	-	2	167
Container Ship	186	394	349	321	381	191	1,029	672	1,010	822	1,781	1,156	-	9	-	1	-	-	8,302
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	273	392	274	176	150	95	83	75	190	127	-	-	-	-	-	-	-	-	1,835
Passenger Ship	233	558	271	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,098
Refrigerated Cargo Ship	4	209	294	58	8	7	47	-	-	-	23	-	-	-	-	-	-	-	650
Ro-Ro Cargo Ship	160	96	1,050	916	306	182	16	57	191	20	200	-	1	-	-	-	-	-	3,195
Tank Barge	-	1	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Tank Ship	20	96	292	162	110	195	225	591	543	763	140	438	153	49	407	302	216	192	4,894
Towing Vessel	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Other a/	16	21	13	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	55
Total	981	1,968	2,732	1,921	1,150	1,061	1,607	1,747	2,302	2,061	2,302	1,730	430	91	433	328	227	198	####

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-3. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Eastport, ME

Year and period	DWT (000s)																	Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	
<u>2002 Restricted period arrivals</u>																		
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																		
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Restricted period arrivals</u>																		
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																		
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-4. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Eastport, ME

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	7	6	2	-	1	-	3	-	-	-	-	-	-	-	-	-	19
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	2	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	7
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	1	-	-	-	1	2	1	-	-	-	-	-	-	-	-	6
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	3	7	7	2	-	1	2	9	1	-	-	-	-	-	-	-	-	32
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	1	6	3	-	-	2	-	3	1	-	-	-	-	-	-	-	-	16
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	1	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	5
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	4	5	4	-	-	-	-	4	3	-	-	-	-	-	-	-	-	20
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	6	11	7	-	-	2	1	9	5	-	-	-	-	-	-	-	-	41

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-5. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Searsport, ME

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	6	22	27	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	63
Tank Ship	2	-	-	-	-	-	3	2	-	2	-	-	-	-	-	-	-	-	9
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	22	27	6	2	-	3	2	-	2	-	-	-	-	-	-	-	-	75
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	1	11	9	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Tank Ship	-	-	-	-	-	-	-	2	-	4	-	-	-	-	-	-	-	-	6
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	11	9	1	1	-	-	2	-	4	-	-	-	-	-	-	-	-	30

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-6. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Searsport, ME

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	12	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	15
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	20	28	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	5	24	-	-	4	30	12	5	1	6	-	-	-	-	-	-	-	87
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20	47	30	-	-	7	30	12	5	1	7	-	-	-	-	-	-	-	159
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	6	-	-	1	5	-	1	-	-	1	-	-	-	-	-	-	-	14
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	8	55	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	2	38	-	-	4	19	11	7	2	3	2	-	-	-	1	-	-	89
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	12	63	42	-	1	9	19	12	7	2	5	2	-	-	-	1	-	-	175

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-7. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Portland, ME

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	4	3	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Tank Ship	3	-	-	-	-	-	1	12	-	1	-	-	-	-	-	-	-	-	17
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	9	4	6	4	1	-	1	12	-	1	-	-	-	-	-	-	-	-	38
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	2	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Tank Barge	5	10	5	4	1	-	-	-	-	2	-	-	-	-	-	-	-	-	27
Tank Ship	16	-	-	-	-	-	1	28	2	5	3	-	-	-	-	-	1	-	56
Towing Vessel	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Other a/	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	53	12	7	12	6	1	3	28	2	7	3	-	-	-	-	-	1	-	135

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-8. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Portland, ME

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	2	3	3	17	14	18	10	15	9	12	2	1	1	-	-	-	-	-	107
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7	-	-	10
Container Ship	-	-	3	2	4	-	5	-	1	11	-	14	-	-	-	-	-	-	40
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	8	10	-	1	2	1	2	2	-	-	-	-	-	-	-	-	-	28
Passenger Ship	3	16	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	24	10	36	16	1	-	-	-	-	-	-	-	-	-	-	-	-	-	87
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	4	28	2	1	5	33	22	13	18	5	1	-	-	114	103	6	1	356
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	33	44	84	37	21	25	49	39	25	41	7	16	1	-	117	110	6	1	656
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	2	7	10	85	68	27	23	31	36	10	9	9	-	-	-	-	-	317
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2	18	-	-	22
Container Ship	-	1	13	10	21	5	29	5	7	48	30	54	-	-	-	-	-	-	223
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	14	22	8	7	6	2	5	10	10	-	-	-	-	-	-	-	-	85
Passenger Ship	5	12	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	54	31	81	64	6	4	-	-	4	-	1	-	-	-	-	-	-	-	245
Tank Barge	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	2	4	45	4	2	9	40	26	37	29	7	2	1	-	67	125	17	15	432
Towing Vessel	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Other a/	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	66	64	178	96	121	92	98	60	90	123	48	65	10	-	69	143	17	15	1,355

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-9. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Portsmouth, NH

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	1	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	3	11	3	1	-	-	-	-	1	-	-	-	-	-	-	-	-	19
Tank Ship	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	3	20	3	1	-	-	3	-	1	-	-	-	-	-	-	-	-	33
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	3	-	-	4	1	4	-	-	-	-	-	-	12
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	4
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	4	-	1	2	1	-	3	1	1	4	1	4	-	-	-	-	-	-	22

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-10. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Portsmouth, NH

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	3	5	21	3	7	3	8	-	-	-	-	-	-	50
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Container Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-	5
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	8	10	4	1	2	7	39	8	14	2	-	-	-	-	-	-	-	95
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	-	11	10	5	3	5	14	60	11	21	6	8	-	-	-	-	-	-	154
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	2	-	1	8	2	29	16	6	2	1	-	-	-	-	-	-	67
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	3
Container Ship	-	1	-	1	4	-	6	5	3	6	5	13	-	-	-	-	-	-	44
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	1	-	1	-	3	-	2	1	-	-	-	-	-	-	-	-	-	9
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	5
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	3	9	5	2	4	8	3	34	20	23	13	1	-	-	-	-	-	-	125
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	4	12	8	4	9	19	11	72	40	35	26	15	-	-	-	-	-	-	255

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-11. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Salem, MA

Year and period	DWT (000s)																			Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+		
<u>2002 Restricted period arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>2002 Total arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	
<u>2003 Restricted period arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>2003 Total arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-12. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Salem, MA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	4
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	2	6	-	1	1	9	-	-	-	-	-	19
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	2	-	1	-	-	-	2	6	1	1	1	9	-	-	-	-	-	23
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	3	2	-	-	1	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	-	-	-	-	-	3	2	-	1	1	-	-	-	-	-	8

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-13. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Boston, MA

Year and period	DWT (000s)																			Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+		
<u>2002 Restricted period arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Tank Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
<u>2002 Total arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
General Dry Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
Tank Barge	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Tank Ship	2	-	-	-	-	-	1	4	2	-	-	-	-	-	-	-	-	-	9	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total	3	3	1	5	-	-	1	4	2	-	-	-	-	-	-	-	-	-	19	
<u>2003 Restricted period arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total	1	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	4	
<u>2003 Total arrivals</u>																				
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freight Barge	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ro-Ro Cargo Ship	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tank Ship	1	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	5	
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Total	5	1	2	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	12	

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-14. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Boston, MA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	2	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	7
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	1	-	1	1	-	-	6	3	2	4	-	-	-	-	-	-	-	18
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	8	-	4	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	2	-	-	-	5	15	8	4	5	5	-	-	-	-	-	-	44
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8	7	8	10	2	-	5	22	11	6	10	5	-	-	-	-	-	-	94
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	2	8	28	1	2	-	5	7	2	3	4	1	-	-	-	-	-	63
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Container Ship	-	16	-	1	2	6	1	35	36	19	31	2	-	-	-	-	-	-	149
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	9	4	-	3	-	-	2	-	-	-	-	-	-	-	-	-	-	20
Passenger Ship	26	57	7	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	91
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	66	-	28	24	10	-	-	-	-	1	-	-	-	-	-	-	-	-	129
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	2	10	7	-	35	46	120	70	42	19	32	1	-	-	-	-	4	388
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	95	86	57	60	17	43	47	162	113	64	53	39	2	-	-	-	-	4	842
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	3	-	-	-	-	-	-	5	2	4	-	-	-	-	-	-	-	14
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	3	-	-	3	-	20	11	3	-	3	-	-	-	-	-	5	48
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	8	4	1	-	3	-	20	16	5	4	3	-	-	-	-	-	5	80
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	2	11	2	5	1	2	5	2	-	2	2	-	-	-	-	-	34
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Container Ship	-	15	-	1	3	2	1	2	23	9	21	-	-	-	-	-	-	-	77
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	2	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	7
Passenger Ship	4	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Refrigerated Cargo Ship	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Ro-Ro Cargo Ship	27	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	8	1	1	11	11	65	46	19	2	13	3	-	-	-	-	20	200
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	35	36	14	17	6	19	13	70	75	30	23	15	5	-	-	-	-	20	378

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-15. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Cape Cod, MA

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-16. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Cape Cod, MA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	2	-	-	2	6	-	-	-	-	-	-	10
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3	9	-	-	-	-	-	2	-	-	3	6	-	-	-	-	-	-	23
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	1	4	1	-	-	-	-	-	6
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	1	4	1	-	-	-	-	-	6
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	2	1	7	3	-	-	-	-	-	13
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7	2	-	-	-	-	-	-	-	2	1	7	3	-	-	-	-	-	22

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-17. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New Bedford, MA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	12
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	7	-	-	-	1	-	-	12	-	-	-	-	-	-	-	-	-	-	20
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-	-	28
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	16	-	-	-	1	-	-	28	-	-	-	-	-	-	-	-	-	-	45
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	6
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	15
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Ship	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	1	-	2	-	-	-	15	-	-	-	-	-	-	-	-	-	-	22

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-18. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New Bedford, MA

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	1	3	-	-	-	2	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	7	2	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Passenger Ship	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	8	17	4	-	4	-	-	1	3	-	-	-	2	-	-	-	-	-	39
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	6	-	-	1	4	-	-	2	3	-	-	-	-	-	16
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	13	7	7	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Passenger Ship	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Refrigerated Cargo Ship	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	5
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	14	32	8	1	13	-	1	2	4	-	-	2	3	-	-	-	-	-	80
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	2	-	-	2	-	2	1	4	3	-	-	-	-	-	14
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	3	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	7	5	-	3	-	-	2	-	2	1	4	3	-	-	-	-	-	29
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	7	-	2	3	4	5	3	12	7	-	-	-	-	-	43
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	8	5	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	26
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	2	4	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10	21	9	-	12	1	2	3	4	5	3	12	7	-	-	-	-	-	89

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-19. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Providence, RI

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	4
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	6
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Tank Barge	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	9	-	-	-	-	-	1	1	5	9	-	-	-	-	-	-	-	-	25
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	-	-	3	1	-	1	5	5	9	-	-	-	-	-	-	-	-	35
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	3	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-	-	-	7
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	5	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-	-	-	9
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	5	-	-	-	-	-	1	2	-	6	-	-	-	-	-	-	-	-	14
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	9	-	1	1	-	-	1	2	-	6	-	-	-	-	-	-	-	-	20

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-20. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Providence, RI

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	6	-	4	9	5	1	1	-	-	-	-	-	-	-	-	26
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2
Container Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Passenger Ship	14	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	3	5	2	-	-	-	-	1	-	-	-	-	-	-	-	-	11
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	4	-	-	4	3	4	1	2	1	1	-	-	-	-	-	-	21
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	18	10	10	12	3	8	12	9	2	4	2	1	1	-	-	-	-	-	92
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	20	1	7	26	18	7	2	3	4	1	-	-	-	-	-	89
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2
Container Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	5	1	7	-	4	-	-	1	-	-	-	-	-	-	-	-	-	-	18
Passenger Ship	20	13	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
Refrigerated Cargo Ship	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ro-Ro Cargo Ship	-	1	10	15	3	-	-	-	-	1	-	-	-	-	-	-	-	-	30
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	4	12	2	-	15	8	13	10	11	2	1	-	-	-	-	-	-	78
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Total	32	20	32	38	8	22	34	32	17	14	6	5	2	-	-	-	-	-	262
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	1	-	5	1	2	6	6	4	3	-	-	-	-	-	-	-	-	28
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	4	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	7
Passenger Ship	6	18	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
Refrigerated Cargo Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ro-Ro Cargo Ship	-	-	19	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	-	-	-	2	-	10	9	5	1	3	1	-	-	-	-	-	32
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	6	24	24	14	2	5	6	17	13	8	1	3	1	-	-	-	-	-	124
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	1	-	15	2	3	18	12	13	12	3	3	1	-	-	-	-	-	83
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	2
Container Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	6	14	1	-	1	-	2	-	-	-	-	-	-	-	-	-	-	24
Passenger Ship	10	22	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
Refrigerated Cargo Ship	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Ro-Ro Cargo Ship	-	1	44	32	1	-	-	-	-	-	-	-	-	-	-	-	-	-	78
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	3	4	1	1	5	6	21	36	18	4	4	3	-	1	-	-	-	107
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	38	67	49	4	9	24	36	49	30	7	7	5	-	1	-	-	-	337

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-21. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New London, CT

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	3	5	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Tank Ship	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3	5	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	11
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	7	12	7	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Tank Ship	-	-	-	2	-	-	2	1	-	-	-	-	-	-	-	-	-	-	5
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10	12	7	2	3	-	2	1	-	-	-	-	-	-	-	-	-	-	37
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	10	10	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Tank Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	14	10	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	28
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	25	29	7	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	69
Tank Ship	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	59	29	7	1	8	-	1	-	-	-	-	-	-	-	-	-	-	-	105

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-22. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New London, CT

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	1	2	-	-	1	-	-	1	1	-	-	-	-	-	-	-	7
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	1	2	-	1	-	-	-	3	1	-	-	-	-	-	-	-	8
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	-	-	2	-	-	1	2	-	3	-	-	-	-	-	-	-	-	9
Passenger Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	1	1	4	-	1	1	2	-	7	1	-	-	-	-	-	-	-	19
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	2	-	-	-	2	1	3	-	-	-	-	-	-	-	-	8
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	3
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	2	-	-	-	3	2	5	-	-	-	-	-	-	-	-	12
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	6	-	1	-	3	7	6	-	-	-	-	-	-	-	-	23
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	2
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	1	-	-	2	1	2	1	3	-	-	-	-	-	-	-	-	10
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	6
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	1	6	-	3	1	6	8	15	-	-	-	-	-	-	-	-	49

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-23. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New Haven, CT

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	2	14	7	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Tank Ship	9	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Towing Vessel	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	17	14	7	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	49
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	5	63	25	34	1	-	-	-	-	-	-	-	-	-	-	-	-	-	128
Tank Ship	19	-	-	1	-	-	1	1	-	8	-	-	-	-	-	-	-	-	30
Towing Vessel	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	41	63	28	35	1	-	1	1	-	8	-	-	-	-	-	-	-	-	178
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	19	25	11	18	2	-	-	-	-	-	-	-	-	-	-	-	-	-	75
Tank Ship	18	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	20
Towing Vessel	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	47	25	11	19	2	-	-	-	-	2	-	-	-	-	-	-	-	-	106
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	4	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	35	104	42	61	5	-	-	-	-	-	-	-	-	-	-	-	-	-	247
Tank Ship	38	-	-	-	-	-	3	3	-	7	2	-	-	-	-	-	-	-	53
Towing Vessel	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	99	104	42	62	5	-	3	3	-	7	2	-	-	-	-	-	-	-	327

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-24. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New Haven, CT

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	1	-	1	5	5	-	3	4	4	4	1	-	-	-	-	-	-	28
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	3	-	1	3	2	-	-	-	2	-	-	-	-	-	-	-	-	11
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	-	-	-	-	-	3	2	9	4	13	-	-	-	-	-	-	-	-	31
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	8	1	3	8	11	2	12	8	19	4	1	-	-	-	-	-	-	77
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	1	1	4	15	17	3	9	7	10	6	2	-	-	-	-	-	-	75
Combination Carrier (e.g. OBO)	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Container Ship	-	-	-	1	-	2	-	-	-	2	-	-	-	-	-	-	-	-	5
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	7	3	5	12	4	2	2	3	6	-	-	-	-	-	-	-	-	46
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Tank Ship	-	1	-	1	-	11	5	43	31	37	1	-	-	-	-	-	-	-	130
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	16	5	12	27	34	10	54	41	55	7	2	-	-	-	-	-	-	265
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	1	-	2	9	3	1	-	3	4	4	-	-	-	-	-	-	27
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	6	1	2	-	-	-	1	2	-	-	-	-	-	-	-	-	12
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	-	-	5	1	19	21	8	1	-	-	-	1	-	-	-	57
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	-	1	8	1	4	14	4	20	22	13	5	4	-	-	1	-	-	-	97
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	1	1	7	20	10	5	5	6	8	4	-	-	-	-	-	-	67
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	2
Container Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	14	3	10	3	1	-	1	6	-	-	-	-	-	-	-	-	38
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	-	-	7	3	59	58	37	3	1	-	-	1	-	-	-	170
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	-	1	16	4	17	30	14	64	64	51	11	5	-	1	1	-	-	-	279

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-25. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Bridgeport, CT

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	4	11	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Tank Ship	5	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	7
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	11	3	9	-	-	1	1	-	-	-	-	-	-	-	-	-	-	34
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	26	36	10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98
Tank Ship	17	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	20
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	43	36	10	26	-	-	2	1	-	-	-	-	-	-	-	-	-	-	118
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	14	22	9	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58
Tank Ship	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	32	22	9	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	65	51	23	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192
Tank Ship	36	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	38
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	111	51	23	53	-	-	-	-	-	2	-	-	-	-	-	-	-	-	240

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-26. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Bridgeport, CT

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Ro-Ro Cargo Ship	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Tank Barge	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	4	20	1	-	-	-	1	-	-	1	-	1	-	-	-	-	-	30
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	1	-	-	-	-	-	-	4	1	-	5	-	-	-	-	-	11
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	5	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
Ro-Ro Cargo Ship	8	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Tank Barge	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Ship	-	-	-	-	-	-	-	4	3	1	1	1	-	-	-	-	-	-	10
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8	14	57	2	-	-	-	4	3	5	2	1	5	-	-	-	-	-	101
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	5	-	1	8	-	-	-	-	-	14
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	1	-	4
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	19	-	-	-	-	1	-	6	-	2	8	-	-	-	1	-	38
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	1	-	-	-	-	-	-	14	-	2	19	-	-	-	-	-	36
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	10	48	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	4	1	2	1	2	-	-	2	-	1	1	14
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	13	49	9	-	-	-	4	1	16	1	4	19	-	2	-	1	1	120

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-27. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Long Island, NY

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	18	23	11	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	64
Tank Ship	9	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	34	23	11	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	84
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	49	122	27	14	30	-	-	-	-	-	-	-	-	-	-	-	-	-	242
Tank Ship	32	-	-	21	-	-	-	1	1	-	-	-	-	-	-	-	-	-	55
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	113	122	27	35	30	-	-	1	1	-	-	-	-	-	-	-	-	-	329
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	57	70	8	11	29	-	-	-	-	-	-	-	-	-	-	-	-	-	175
Tank Ship	42	-	-	8	-	-	-	1	-	-	-	-	-	-	-	-	-	-	51
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	117	70	8	19	29	-	-	1	-	-	-	-	-	-	-	-	-	-	244
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	174	238	53	49	72	-	-	-	-	-	-	-	-	-	-	-	-	-	586
Tank Ship	130	-	-	17	-	-	-	1	1	-	-	-	-	-	-	-	-	-	149
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	340	238	53	66	72	-	-	1	1	-	-	-	-	-	-	-	-	-	771

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-28. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Long Island, NY

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	2	2	7	-	-	5	-	6	1	23
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	-	-	-	-	-	-	2	2	7	-	-	5	-	6	1	24
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	1	-	1	-	5	5	30	5	3	21	-	20	7	98
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	-	-	1	-	2	-	5	5	31	5	3	21	-	20	7	101
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	2	2	12	3	-	9	3	9	3	43
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	2	2	12	3	-	9	3	9	3	43
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	2	-	-	-	-	-	2	5	2	32	5	1	24	8	18	7	106
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	1	2	2	-	-	-	-	-	2	5	2	32	6	1	25	8	18	7	111

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-29. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New York City, NY

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	18	2	4	9	9	-	-	17	7	-	-	-	-	-	-	66
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Barge	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	33	-	-	-	-	-	11	18	13	2	-	-	-	-	-	-	-	-	77
Towing Vessel	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	40	-	-	22	3	5	20	27	13	2	17	7	-	-	-	-	-	-	156
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	41	5	14	22	19	-	-	40	18	-	-	-	-	-	-	159
Freight Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	2	1	-	9	3	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Tank Barge	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	83	-	-	8	-	-	19	50	29	13	-	-	-	-	-	-	-	-	202
Towing Vessel	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Other a/	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	109	3	2	58	8	16	41	71	29	13	40	18	-	-	-	-	-	-	408
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	9	-	12	12	6	-	4	18	11	-	-	-	-	-	-	72
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Barge	1	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Tank Ship	47	-	-	6	-	-	13	18	13	6	-	-	-	-	-	-	-	-	103
Towing Vessel	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	59	13	1	19	1	12	25	24	13	10	18	11	-	-	-	-	-	-	206
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	27	-	31	33	17	-	7	45	29	-	-	-	-	-	-	189
Freight Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	9	3	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Tank Barge	2	15	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Tank Ship	79	-	-	10	-	-	27	37	36	14	3	-	-	-	-	-	-	-	206
Towing Vessel	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Other a/	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	104	17	3	47	4	31	60	54	36	21	48	29	-	-	-	-	-	-	454

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-30. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: New York City, NY

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	9	5	21	2	12	15	20	22	19	8	6	6	1	-	-	-	-	146
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	2	2	2	8	2	1	-	-	-	17
Container Ship	4	6	71	39	45	52	90	56	111	144	167	130	-	-	-	-	-	-	915
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	12	6	2	4	6	7	10	6	4	-	-	-	-	-	-	-	-	61
Passenger Ship	36	42	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	84
Refrigerated Cargo Ship	-	1	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Ro-Ro Cargo Ship	10	16	97	62	30	23	4	4	21	2	34	-	-	-	-	-	-	-	303
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	3	5	36	11	13	32	22	62	59	69	21	51	19	11	65	9	11	1	500
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Total	61	94	229	135	95	125	138	152	219	240	232	189	33	14	66	9	11	1	2,043
<u>2002 Total arrivals</u>																			
Bulk Carrier	1	17	15	48	11	23	27	42	66	47	23	14	14	2	-	-	-	-	350
Combination Carrier (e.g. OBO)	-	1	-	-	-	-	-	1	-	6	4	4	18	5	1	2	-	-	42
Container Ship	7	9	170	99	108	103	227	145	295	317	436	333	-	-	-	-	-	-	2,249
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	27	12	6	7	9	14	19	12	5	-	-	-	-	-	-	-	-	120
Passenger Ship	83	97	13	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	194
Refrigerated Cargo Ship	-	2	18	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	24
Ro-Ro Cargo Ship	25	39	219	167	73	52	12	11	47	4	96	1	-	-	-	-	-	-	746
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	4	15	81	33	25	71	54	166	137	174	44	133	57	24	143	22	26	11	1,220
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	8	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Total	137	213	528	353	225	260	334	384	557	553	605	485	89	31	144	24	26	11	4,959
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	1	5	10	17	2	13	14	26	28	27	15	5	7	1	-	-	-	-	171
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	3	2	-	7	2	2	-	-	-	16
Container Ship	-	8	76	37	36	19	119	76	100	89	196	178	-	-	-	-	-	-	934
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	3	9	1	1	2	3	4	1	2	-	-	-	-	-	-	-	-	-	26
Passenger Ship	22	42	22	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87
Refrigerated Cargo Ship	-	-	3	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	6
Ro-Ro Cargo Ship	8	16	74	88	25	20	3	4	26	1	39	-	-	-	-	-	-	-	304
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	12	22	12	13	30	19	78	72	112	22	85	32	7	65	20	11	4	616
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	35	92	208	156	78	87	159	185	228	232	275	268	46	10	67	20	11	4	2,161
<u>2003 Total arrivals</u>																			
Bulk Carrier	1	9	21	47	7	36	27	51	71	61	37	8	14	2	-	-	-	-	392
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	6	6	-	15	9	7	-	-	-	44
Container Ship	2	22	197	84	85	45	296	192	257	234	500	393	-	-	-	-	-	-	2,307
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	16	4	5	8	10	6	1	3	2	-	-	-	-	-	-	-	-	64
Passenger Ship	61	122	48	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	239
Refrigerated Cargo Ship	-	-	8	-	-	7	-	-	-	-	5	-	-	-	-	-	-	-	20
Ro-Ro Cargo Ship	25	47	188	205	56	45	3	10	58	5	90	-	-	-	-	-	-	-	732
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	3	24	42	38	33	59	57	177	168	269	49	167	75	22	145	56	25	10	1,419
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	105	241	508	387	189	202	389	432	557	577	687	568	104	33	152	56	25	10	5,222

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-31. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Philadelphia, PA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Freight Barge	1	4	1	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
General Dry Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	2	-	-	-	1	1	-	-	3	1	-	-	-	-	-	-	-	8
Tank Ship	3	-	-	5	-	-	6	21	-	7	-	-	-	-	-	-	-	-	42
Towing Vessel	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	16	6	2	12	13	1	7	21	-	10	1	-	-	-	-	-	-	-	89
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Freight Barge	2	11	3	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
General Dry Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	2	1	-	1	2	1	-	-	4	1	-	-	-	-	-	-	-	12
Tank Ship	3	-	-	10	-	-	13	49	-	16	-	-	-	-	-	-	-	-	91
Towing Vessel	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Other a/	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	28	14	5	29	19	2	14	49	-	20	1	-	-	-	-	-	-	-	181
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	1	2	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Tank Ship	3	-	-	2	-	-	4	9	2	4	-	-	-	-	-	-	-	-	24
Towing Vessel	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	3	2	9	-	-	4	9	2	4	-	1	-	-	-	-	-	-	45
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	4	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	1	2	2	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	11
Tank Ship	4	-	-	7	-	-	11	20	6	8	3	-	-	-	-	-	-	-	59
Towing Vessel	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	22	6	2	24	-	2	11	20	6	8	3	1	-	-	-	-	-	-	105

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-32. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Philadelphia, PA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	2	17	32	12	13	29	22	21	19	23	7	17	4	-	-	-	-	-	218
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	15	-	1	-	17
Container Ship	42	31	10	46	46	6	16	2	4	9	18	-	-	-	-	-	-	-	230
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	6	47	33	26	8	11	3	7	2	3	-	-	-	-	-	-	-	-	146
Passenger Ship	3	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Refrigerated Cargo Ship	6	59	39	20	4	3	26	-	-	-	1	-	-	-	-	-	-	-	158
Ro-Ro Cargo Ship	11	2	23	36	10	-	-	-	-	-	-	-	-	-	-	-	-	-	82
Tank Barge	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	1	6	25	24	11	11	10	14	14	16	4	29	4	18	74	35	73	52	421
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	72	163	162	164	93	60	78	44	39	51	30	46	8	19	89	35	74	52	1,279
<u>2002 Total arrivals</u>																			
Bulk Carrier	3	34	66	28	29	59	36	60	40	45	13	31	8	-	-	-	-	-	452
Combination Carrier (e.g. OBO)	-	1	-	-	-	-	-	-	-	-	1	-	-	1	26	-	2	-	31
Container Ship	91	51	23	94	92	7	32	5	9	16	36	-	-	-	-	-	-	-	456
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	12	89	60	53	18	22	8	11	4	9	-	-	-	-	-	-	-	-	286
Passenger Ship	5	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Refrigerated Cargo Ship	7	103	71	38	6	5	51	-	-	-	4	-	-	-	-	-	-	-	285
Ro-Ro Cargo Ship	20	6	44	67	19	-	-	-	-	-	-	-	-	-	-	-	-	-	156
Tank Barge	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	2	21	55	47	23	19	15	31	21	30	8	63	10	29	159	63	153	112	861
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	144	307	319	327	188	112	143	107	74	100	62	94	18	30	185	63	155	112	2,540
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	14	9	15	9	32	12	32	17	19	7	2	3	-	-	-	-	-	171
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	6
Container Ship	25	56	8	39	38	2	16	7	8	11	37	-	-	-	-	-	-	-	247
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	5	37	27	22	2	5	7	2	1	2	-	-	-	-	-	-	-	-	110
Passenger Ship	7	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Refrigerated Cargo Ship	3	58	114	22	2	-	23	-	-	-	5	-	-	-	-	-	-	-	227
Ro-Ro Cargo Ship	7	1	23	37	6	-	-	-	-	-	-	-	-	-	-	-	-	-	74
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	3	9	14	11	8	14	26	10	23	4	25	2	10	75	46	71	62	413
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	48	176	192	149	68	47	72	67	36	55	53	27	5	10	81	46	71	62	1,265
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	32	22	31	18	49	16	53	38	33	15	8	7	-	-	-	-	-	322
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	1	-	-	-	-	14	2	-	2	19
Container Ship	51	106	15	78	74	5	27	14	13	19	75	1	-	-	-	-	-	-	478
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	11	64	42	39	6	10	13	5	3	3	-	-	-	-	-	-	-	-	196
Passenger Ship	11	13	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Refrigerated Cargo Ship	3	114	186	43	4	-	47	-	-	-	9	-	-	-	-	-	-	-	406
Ro-Ro Cargo Ship	11	3	57	68	11	-	-	-	-	-	-	-	-	-	-	-	-	-	150
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	17	25	32	18	11	26	45	21	48	5	40	5	16	153	100	143	121	826
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	89	349	349	291	131	75	129	117	75	104	104	49	12	16	167	102	143	123	2,425

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-33. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Baltimore, MD

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	19	5	5	1	-	-	-	-	-	-	-	-	-	-	-	30
Tank Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	1	-	-	-	-	-	2	1	-	5	-	-	-	-	-	-	-	-	9
Towing Vessel	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	-	-	19	6	5	3	2	-	5	-	-	-	-	-	-	-	-	51
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	4
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	1	1	40	18	13	1	-	-	-	-	-	-	-	-	-	-	-	74
Tank Barge	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Ship	2	-	-	-	-	-	2	2	-	9	-	-	-	-	-	-	-	-	15
Towing Vessel	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	26	2	1	40	19	14	3	3	-	9	-	-	-	-	2	-	-	-	119
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	15	7	3	-	-	-	-	-	-	-	-	-	-	-	-	25
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
Towing Vessel	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	2	1	15	7	4	-	-	-	3	-	-	-	-	-	-	-	-	36
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	5
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	30	17	4	-	-	-	-	-	-	-	-	-	-	-	-	52
Tank Barge	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	-	-	-	1	-	-	3	-	-	8	-	-	-	-	-	-	-	-	12
Towing Vessel	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	11	5	3	31	17	7	5	-	-	8	-	-	-	-	1	-	-	-	88

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-34. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Baltimore, MD

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	2	14	14	12	5	7	7	5	5	5	2	16	34	-	-	1	6	2	137
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-	3
Container Ship	2	2	-	5	5	23	41	14	36	13	35	-	-	-	-	-	-	-	176
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	7	12	10	19	24	7	1	-	10	7	-	-	-	-	-	-	-	-	97
Passenger Ship	1	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Refrigerated Cargo Ship	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Ro-Ro Cargo Ship	1	1	80	63	35	16	8	8	10	2	22	-	-	-	-	-	-	-	246
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	8	6	2	4	5	5	2	3	12	1	8	3	-	1	-	-	-	60
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Total	13	55	113	101	73	58	62	29	64	40	60	24	38	1	1	1	6	2	741
<u>2002 Total arrivals</u>																			
Bulk Carrier	6	29	34	29	11	20	15	12	12	12	8	38	88	2	-	1	11	5	333
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	1	-	-	3	1	-	-	-	-	5
Container Ship	2	4	1	8	8	49	103	30	80	35	94	-	-	-	-	-	-	-	414
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	12	39	26	38	64	10	2	-	24	16	-	-	-	-	-	-	-	-	231
Passenger Ship	6	29	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	37
Refrigerated Cargo Ship	-	5	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Ro-Ro Cargo Ship	4	2	204	164	84	42	23	18	29	5	55	-	-	-	-	-	-	-	630
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	14	20	8	10	20	15	7	9	31	1	11	4	-	2	-	-	-	152
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	2	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Total	32	133	292	247	179	141	158	67	154	100	158	49	95	3	2	1	11	5	1,827
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	10	8	9	6	11	5	16	6	12	8	21	30	4	-	-	-	1	147
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	3
Container Ship	4	6	-	3	4	11	43	11	34	14	28	-	-	-	-	-	-	-	158
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	14	7	16	27	2	1	3	1	7	-	-	-	-	-	-	-	-	82
Passenger Ship	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Refrigerated Cargo Ship	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Ro-Ro Cargo Ship	4	-	109	87	26	20	3	6	20	1	19	-	-	-	-	-	-	-	295
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	4	6	4	2	3	3	2	4	21	2	12	12	-	3	1	-	7	86
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	6	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	7
Total	12	52	134	119	65	47	56	39	65	55	57	33	44	4	3	1	-	8	794
<u>2003 Total arrivals</u>																			
Bulk Carrier	1	20	28	16	10	28	13	29	12	20	20	32	76	7	-	-	2	2	316
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	2	-	-	1	-	4	1	-	-	-	-	8
Container Ship	7	11	1	10	13	26	102	26	74	32	72	1	-	-	-	-	-	-	375
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	8	33	22	38	62	5	3	7	14	19	-	-	-	-	-	-	-	-	211
Passenger Ship	6	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41
Refrigerated Cargo Ship	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Ro-Ro Cargo Ship	9	-	233	183	69	42	5	15	36	6	44	-	-	-	-	-	-	-	642
Tank Barge	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	1	13	19	15	3	3	7	4	14	49	7	16	25	-	3	2	-	10	191
Towing Vessel	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Other a/	1	15	6	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	25
Total	38	130	317	262	157	104	133	83	150	126	144	49	105	8	3	2	2	12	1,825

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-35. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Hampton Roads, VA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	7	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	12
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	6	-	-	2	-	-	17	7	23	8	10	6	-	-	-	-	-	-	79
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	2	3	-	1	-	-	-	-	-	-	-	-	6
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total																			-
<u>2002 Total arrivals</u>																			
Bulk Carrier	15	2	-	-	-	-	1	17	-	-	-	-	-	-	-	-	-	-	35
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	16	-	-	9	1	-	39	17	52	21	21	16	-	-	-	-	-	-	192
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	2	-	3	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	4	4	1	1	-	-	-	-	-	-	-	-	10
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	42	2	3	9	7	2	44	38	53	22	21	16	-	-	-	-	-	-	259
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	6	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	11
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	7	-	-	1	-	1	18	7	21	5	8	10	-	-	-	-	-	-	78
Freight Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	4
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	5
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	-	-	-	-	-	8	-	-	1	-	-	-	-	-	-	-	-	10
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	18	1	-	3	2	5	27	12	21	6	8	10	-	-	-	-	-	-	113
<u>2003 Total arrivals</u>																			
Bulk Carrier	13	1	-	-	-	-	1	17	-	-	-	-	-	-	-	-	-	-	32
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	16	-	-	3	-	5	40	17	51	12	21	25	-	-	-	-	-	-	190
Freight Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	1	2	1	6	2	-	-	-	-	-	-	-	-	-	-	-	12
Passenger Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	3	5	3	-	-	-	-	-	-	-	-	-	-	-	-	11
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	1	-	-	-	-	-	13	-	1	4	2	-	-	-	-	-	-	-	21
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Total	44	5	1	8	6	14	56	34	52	16	23	25	-	-	-	-	-	-	284

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-36. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Hampton Roads, VA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	12	2	10	10	6	13	15	9	4	5	13	18	2	1	1	2	4	127
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	-	-	5
Container Ship	1	8	15	21	60	22	61	33	77	70	160	88	-	-	-	-	-	-	616
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	20	11	1	3	12	8	6	5	2	-	-	-	-	-	-	-	-	77
Passenger Ship	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	3
Ro-Ro Cargo Ship	2	-	14	7	9	3	3	4	12	-	23	-	-	-	-	-	-	-	77
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	4	5	11	2	5	-	4	2	2	1	12	11	5	7	8	1	1	81
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	14	47	47	50	84	50	85	62	105	78	189	113	31	9	9	9	3	5	990
<u>2002 Total arrivals</u>																			
Bulk Carrier	2	33	8	23	17	16	26	29	35	12	7	27	46	5	1	1	9	13	310
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	8	6	1	1	-	-	16
Container Ship	1	17	42	51	145	46	146	77	213	187	386	216	-	-	-	-	-	-	1,527
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	23	48	32	8	16	22	21	14	15	2	-	-	-	-	-	-	-	-	201
Passenger Ship	7	12	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Refrigerated Cargo Ship	-	3	2	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	10
Ro-Ro Cargo Ship	6	8	21	17	22	4	10	8	25	2	53	-	1	-	-	-	-	-	177
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	9	15	26	7	8	8	9	8	10	8	27	19	6	13	14	2	4	194
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Total	44	131	120	125	209	101	211	137	296	213	454	270	74	17	15	16	11	17	2,461
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	1	7	7	7	8	7	8	8	9	6	2	15	31	4	-	2	3	1	126
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	1	-	-	8
Container Ship	1	13	19	24	39	15	76	46	81	49	150	109	-	-	-	-	-	-	622
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	13	11	5	1	7	8	2	2	-	-	-	-	-	-	-	-	-	53
Passenger Ship	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	1	1	4	10	8	4	1	3	9	-	16	-	-	-	-	-	-	-	57
Tank Barge	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	-	6	5	5	3	7	2	3	4	16	-	18	11	2	5	-	3	7	97
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Total	8	41	53	51	59	40	96	62	105	71	168	142	48	7	5	3	6	8	973
<u>2003 Total arrivals</u>																			
Bulk Carrier	2	19	16	12	15	20	13	28	27	12	6	30	73	6	-	2	9	2	292
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	-	2	-	17	7	2	3	-	-	32
Container Ship	2	33	46	53	93	33	209	121	211	125	349	256	-	-	-	-	-	-	1,531
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	8	29	29	10	9	11	17	8	6	2	-	-	-	-	-	-	-	-	129
Passenger Ship	4	15	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
Refrigerated Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	4	3	18	24	24	5	2	8	22	2	49	-	1	-	-	-	-	-	162
Tank Barge	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	1	12	12	5	7	8	8	5	8	27	5	29	18	6	10	8	12	8	189
Towing Vessel	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Other a/	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	3
Total	24	111	136	104	148	77	251	171	274	168	411	315	109	19	12	13	21	10	2,374

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-37. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Morehead City, NC

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	1	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Tank Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	1	3	1	-	1	-	-	1	-	-	-	-	-	-	-	-	8
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	1	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	4
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	1	2	-	-	3	-	-	-	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	1	-	3	1	-	2	6	-	-	3	-	-	-	-	-	-	-	-	16

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-38. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Morehead City, NC

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	2	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	2	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	3
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	4	2	1	2	5	-	-	1	-	-	-	-	-	-	-	-	-	15
<u>2002 Total arrivals</u>																			
Bulk Carrier	1	4	-	-	5	2	1	-	1	-	-	1	-	-	-	-	-	-	15
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	2	-	-	-	1	-	-	-	4	-	-	-	-	-	-	-	-	-	7
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	2	1	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	11
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	2	3	1	8	1	-	-	-	-	-	-	-	-	-	-	-	15
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7	6	3	4	8	12	2	-	5	-	-	1	-	-	-	-	-	-	48
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	2	-	-	3	3	-	-	-	-	1	-	-	-	-	-	-	-	9
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	2	-	-	-	1	1	-	-	2	-	-	-	-	-	-	-	-	-	6
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	5	2	-	2	1	4	-	1	-	-	-	-	-	-	-	-	-	-	15
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	2	-	9	2	1	-	-	-	1	-	-	-	-	-	-	15
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	9	4	-	4	5	17	2	2	2	-	1	1	-	-	-	-	-	-	47
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	3	1	-	3	7	4	-	-	-	2	2	1	-	-	-	-	-	23
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	2	1	-	-	4	1	-	-	7	-	-	-	-	-	-	-	-	-	15
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	7	3	-	2	5	12	-	1	1	-	-	-	-	-	-	-	-	-	31
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	3	3	2	22	3	2	-	2	-	1	-	-	-	-	-	-	38
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	11	8	4	5	14	42	7	3	8	2	2	3	1	-	-	-	-	-	110

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-39. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Wilmington, NC

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	5	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Tank Ship	9	-	-	-	-	-	3	-	7	3	-	-	-	-	-	-	-	-	22
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	11	5	4	3	-	-	3	-	8	3	1	-	-	-	-	-	-	-	38
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	4	-	-	3	-	-	-	1	-	-	-	-	-	-	-	8
Freight Barge	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Tank Barge	-	10	3	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Tank Ship	21	-	-	3	-	-	5	-	14	7	-	-	-	-	-	-	-	-	50
Towing Vessel	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	28	10	9	17	4	-	11	-	15	7	1	-	-	-	-	-	-	-	102
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	3
Tank Barge	-	4	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Tank Ship	9	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	18
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10	5	-	7	3	-	2	-	9	2	-	-	-	-	-	-	-	-	38
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	9	-	-	4	-	-	-	1	-	-	-	-	-	-	-	14
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	4
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	2	-	-	2	-	3	-	-	-	-	-	-	-	-	-	-	-	7
Tank Barge	-	6	-	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Tank Ship	20	-	-	-	-	-	2	-	22	1	-	-	-	-	-	-	-	-	45
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	21	8	-	19	5	1	11	-	22	3	1	-	-	-	-	-	-	-	99

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-40. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Wilmington, NC

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	4	6	2	6	6	16	8	4	5	6	1	-	-	-	-	-	-	-	64
Combination Carrier (e.g. OBO)	-	1	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	4
Container Ship	-	-	-	-	2	2	-	5	11	8	-	13	-	-	-	-	-	-	41
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	15	6	6	9	3	3	-	3	11	5	-	-	-	-	-	-	-	-	61
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	1	2	1	-	-	-	-	7	-	-	-	-	-	-	-	-	-	12
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	5	15	12	3	12	9	4	3	17	5	5	-	-	-	-	-	-	90
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20	19	25	28	14	33	17	16	37	38	6	18	1	-	-	-	-	-	272
<u>2002 Total arrivals</u>																			
Bulk Carrier	12	11	8	11	12	30	13	10	12	12	2	1	1	-	-	-	-	-	135
Combination Carrier (e.g. OBO)	-	1	-	-	-	-	-	-	-	5	-	-	1	-	-	-	-	-	7
Container Ship	2	-	4	-	3	4	-	9	33	17	-	32	-	-	-	-	-	-	104
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	30	16	15	16	6	7	1	6	23	11	-	-	-	-	-	-	-	-	131
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	3	2	2	1	-	-	-	-	20	-	-	-	-	-	-	-	-	-	28
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	10	42	23	11	24	19	20	13	42	11	12	-	-	-	-	-	-	228
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	49	41	71	51	32	65	33	45	101	87	13	45	2	-	-	-	-	-	635
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	5	4	1	7	-	8	4	7	7	2	4	-	1	-	-	-	-	-	50
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	3
Container Ship	2	1	1	1	1	2	1	2	9	8	7	3	-	-	-	-	-	-	38
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	7	3	6	3	1	3	3	10	4	-	-	-	-	-	-	-	-	49
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	5	-	1	-	-	-	-	-	-	-	7
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	17	6	4	7	7	11	7	20	3	6	-	-	-	-	-	-	88
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	16	13	22	21	8	18	15	23	38	36	15	9	2	-	-	-	-	-	236
<u>2003 Total arrivals</u>																			
Bulk Carrier	12	12	7	10	2	21	7	13	15	6	5	-	1	-	-	-	-	-	111
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	7	-	-	1	-	-	-	-	-	8
Container Ship	3	2	3	1	1	2	1	6	21	26	15	3	-	-	-	-	-	-	84
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	16	13	6	15	6	4	5	8	31	11	-	-	-	-	-	-	-	-	115
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ro-Ro Cargo Ship	1	-	-	2	1	-	-	-	15	-	1	-	-	-	-	-	-	-	20
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	38	14	12	12	19	29	10	52	7	21	-	1	-	-	-	-	215
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	32	28	55	42	22	39	32	56	92	102	28	24	2	1	-	-	-	-	555

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-41. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Georgetown, SC

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	2
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	2
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-42. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Georgetown, SC

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	3	5	2	-	2	2	1	1	-	3	-	-	-	-	-	-	-	19
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	2	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	5
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	5	5	3	-	2	2	1	4	1	3	-	-	-	-	-	-	-	26
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	10	11	3	1	5	6	3	3	3	3	-	-	-	-	-	-	-	48
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
Container Ship	1	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	3
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	6	1	1	-	-	-	1	6	5	-	-	-	-	-	-	-	-	20
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	16	12	5	1	5	6	4	9	13	3	1	-	-	-	-	-	-	76
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	3

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-43. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Charleston, SC

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	1	-	-	6	-	-	-	-	-	-	-	-	7
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	2	2	-	25	11	59	10	66	9	-	-	-	-	-	-	184
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	11	5	6	1	-	-	-	-	-	-	-	-	-	-	-	24
Tank Barge	-	1	-	1	18	-	1	-	-	-	-	-	-	-	-	-	-	-	21
Tank Ship	-	-	-	-	-	-	-	6	11	2	-	-	-	-	-	-	-	-	19
Towing Vessel	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Other a/	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Total	20	2	1	15	25	7	28	17	70	18	66	9	-	-	-	-	-	-	278
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	2	-	-	-	-	1	-	-	11	-	-	-	-	-	-	-	-	14
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	5	4	-	41	20	103	20	115	16	-	-	-	-	-	-	324
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	2	1	19	12	11	1	-	-	-	-	-	-	-	-	-	-	-	46
Tank Barge	-	1	-	2	30	-	2	-	-	-	-	-	-	-	-	-	-	-	35
Tank Ship	1	-	-	1	-	-	3	7	16	3	-	-	-	-	-	-	-	-	31
Towing Vessel	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Other a/	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Total	28	6	1	28	46	12	48	27	119	34	115	16	-	-	-	-	-	-	480
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	2	28	10	58	17	56	17	-	-	-	-	-	-	188
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	1	-	12	9	4	1	-	-	-	-	-	-	-	-	-	-	-	28
Tank Barge	-	-	4	3	9	-	1	-	-	-	-	-	-	-	-	-	-	-	17
Tank Ship	1	-	-	-	-	-	5	13	6	1	-	-	-	-	-	-	-	-	26
Towing Vessel	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	20	1	4	15	18	7	35	23	64	18	56	17	-	-	-	-	-	-	278
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	1	-	7	57	16	102	30	89	27	-	-	-	-	-	-	329
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
Passenger Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	3	-	20	14	6	3	-	-	-	-	-	-	-	-	-	-	-	47
Tank Barge	-	-	4	3	10	-	1	-	-	-	-	-	-	-	-	-	-	-	18
Tank Ship	1	-	-	-	-	-	8	23	16	2	-	-	-	-	-	-	-	-	50
Towing Vessel	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	24	3	4	25	24	14	69	39	118	32	89	27	-	-	-	-	-	-	468

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-44. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Charleston, SC

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	3	2	6	16	2	3	8	15	22	9	5	2	12	1	-	-	-	-	106
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	3	3	23	9	30	39	122	63	75	85	187	99	-	-	-	-	-	-	738
Freight Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	3	9	6	10	5	5	4	19	27	2	-	-	-	-	-	-	-	-	90
Passenger Ship	8	11	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Refrigerated Cargo Ship	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Ro-Ro Cargo Ship	-	1	45	24	4	32	-	1	-	1	7	-	-	-	-	-	-	-	115
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	5	4	2	-	2	6	14	34	7	6	-	-	-	-	-	-	80
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	18	28	87	65	44	79	136	104	138	131	206	107	12	1	-	-	-	-	1,156
<u>2002 Total arrivals</u>																			
Bulk Carrier	3	2	8	30	3	7	20	34	40	14	10	6	18	1	-	-	-	-	196
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	2
Container Ship	4	5	46	13	53	53	208	118	147	150	340	171	-	-	-	-	-	-	1,308
Freight Barge	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	7	15	7	15	8	6	5	26	49	4	-	-	-	-	-	-	-	-	142
Passenger Ship	11	18	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	32
Refrigerated Cargo Ship	-	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Ro-Ro Cargo Ship	-	3	72	42	7	55	-	1	-	1	11	-	-	-	-	-	-	-	192
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	2	9	10	4	2	4	15	23	58	13	11	-	-	-	-	-	-	151
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	26	48	144	112	77	123	237	195	259	228	374	188	18	1	-	-	-	-	2,030
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	1	6	3	21	5	7	10	16	19	4	2	4	9	-	-	-	-	-	107
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	2	4	25	11	14	16	117	99	87	53	196	91	-	5	-	-	-	-	720
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	3	7	2	5	3	6	6	5	17	7	-	-	-	-	-	-	-	-	61
Passenger Ship	3	21	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Refrigerated Cargo Ship	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Ro-Ro Cargo Ship	-	2	28	44	10	16	-	3	7	-	4	-	-	-	-	-	-	-	114
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	6	-	-	5	1	5	14	43	3	16	-	1	-	-	-	-	95
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	43	67	81	32	50	134	128	144	107	205	111	9	6	-	-	-	-	1,126
<u>2003 Total arrivals</u>																			
Bulk Carrier	1	13	4	30	6	10	12	27	34	9	4	8	12	-	-	-	-	-	170
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Container Ship	3	9	43	17	23	24	204	163	151	86	338	158	-	5	-	-	-	-	1,224
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	16	2	5	6	6	9	7	29	12	-	-	-	-	-	-	-	-	96
Passenger Ship	8	26	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
Refrigerated Cargo Ship	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Ro-Ro Cargo Ship	2	2	49	70	15	26	-	3	11	-	8	-	-	-	-	-	-	-	186
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	11	1	-	7	4	10	29	69	11	24	-	1	-	-	-	-	168
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	18	74	115	123	50	73	229	212	254	176	361	190	12	6	-	-	-	-	1,894

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-45. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Savannah, GA

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	7	-	-	4	10	-	-	5	-	-	-	-	26
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	3	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	7
Tank Ship	-	-	-	2	-	-	2	12	4	1	-	-	-	-	-	-	-	-	21
Towing Vessel	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10	3	1	5	-	1	9	12	4	6	10	-	-	5	-	-	-	-	66
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	12	-	-	10	23	-	-	10	-	-	-	-	55
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Barge	-	7	1	2	-	-	3	-	-	1	-	-	-	-	-	-	-	-	14
Tank Ship	2	-	-	7	-	-	5	29	6	2	-	-	-	-	-	-	-	-	51
Towing Vessel	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	27	7	1	11	-	1	21	29	6	13	23	-	-	10	-	-	-	-	149
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	3	-	-	2	6	-	-	4	-	-	-	-	15
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	-	-	-	-	-	-	4	16	2	1	-	-	-	-	-	-	-	-	23
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	5	3	-	1	1	-	7	16	2	3	6	-	-	4	-	-	-	-	48
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	9	-	-	2	13	-	-	7	-	-	-	-	31
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Barge	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Tank Ship	-	-	-	-	-	-	5	30	13	1	-	-	-	-	-	-	-	-	49
Towing Vessel	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	10	4	-	1	1	2	14	30	13	3	13	-	-	7	-	-	-	-	98

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-46. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Savannah, GA

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	1	24	8	18	13	23	11	9	10	13	3	-	1	-	-	-	-	-	134
Combination Carrier (e.g. OBO)	-	2	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	6
Container Ship	20	5	2	29	32	41	49	21	87	105	84	91	-	-	-	-	-	-	566
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	13	23	12	9	9	18	6	6	31	14	-	-	-	-	-	-	-	-	141
Passenger Ship	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	3	-	-	-	-	1	-	-	-	-	-	-	-	4
Ro-Ro Cargo Ship	5	1	13	10	17	7	16	8	15	3	1	-	-	-	-	-	-	-	96
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	2	16	19	8	14	7	17	13	8	9	17	4	-	-	-	-	-	135
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	41	57	52	85	80	106	89	63	156	145	98	108	5	-	-	-	-	-	1,085
<u>2002 Total arrivals</u>																			
Bulk Carrier	4	38	26	32	20	48	24	26	23	25	7	-	1	-	-	-	-	-	274
Combination Carrier (e.g. OBO)	-	2	-	-	-	-	-	6	-	6	1	-	-	-	-	-	-	-	15
Container Ship	46	8	4	55	65	78	98	50	201	214	192	203	-	-	-	-	-	-	1,214
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	25	55	33	20	21	30	8	12	55	26	-	-	-	-	-	-	-	-	285
Passenger Ship	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Refrigerated Cargo Ship	-	-	-	-	-	7	-	-	-	-	1	-	-	-	-	-	-	-	8
Ro-Ro Cargo Ship	10	5	19	22	33	13	32	18	31	8	2	-	-	-	-	-	-	-	193
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	2	4	41	49	14	23	22	43	32	14	18	38	5	-	-	-	-	-	305
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	90	112	124	178	154	199	184	155	342	293	221	241	6	-	-	-	-	-	2,299
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	3	19	17	11	14	27	19	9	14	9	6	-	-	-	-	-	-	-	148
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	2	-	5	-	-	-	-	-	-	-	-	7
Container Ship	19	6	7	29	26	18	53	51	84	89	164	132	-	4	-	-	-	-	682
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	16	30	19	15	5	2	6	3	15	14	-	-	-	-	-	-	-	-	125
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	5
Ro-Ro Cargo Ship	8	2	11	13	14	6	3	9	15	-	-	-	-	-	-	-	-	-	81
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	4	10	18	7	7	5	25	14	11	4	23	2	-	-	-	-	-	130
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	48	61	64	86	66	60	86	99	142	128	179	155	2	4	-	-	-	-	1,180
<u>2003 Total arrivals</u>																			
Bulk Carrier	6	40	43	27	19	52	37	29	35	22	7	-	-	-	-	-	-	-	317
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	3	-	11	-	-	-	-	-	-	-	-	14
Container Ship	21	15	18	57	57	30	100	122	178	215	336	276	-	4	-	-	-	-	1,429
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	27	58	35	26	10	14	15	7	30	31	-	-	-	-	-	-	-	-	253
Passenger Ship	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	9
Ro-Ro Cargo Ship	17	5	25	28	31	14	3	20	36	5	1	-	-	-	-	-	-	-	185
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	5	29	41	17	20	16	56	35	21	7	46	14	-	1	-	-	-	308
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	74	125	150	179	134	130	171	237	314	305	360	322	14	4	1	-	-	-	2,520

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-47. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Brunswick, GA

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	15	5	8	-	-	-	-	-	-	-	-	-	-	-	-	29
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	1	15	5	8	-	-	-	-	-	-	-	-	-	-	-	-	29
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	27	10	14	-	-	-	-	-	-	-	-	-	-	-	-	52
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1	1	27	10	14	-	-	-	-	-	-	-	-	-	-	-	-	53
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	11	8	2	-	-	-	-	-	-	-	-	-	-	-	-	21
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	11	8	2	-	-	-	-	-	-	-	-	-	-	-	-	22
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	19	14	2	-	-	-	-	-	-	-	-	-	-	-	-	35
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	-	-	19	14	2	-	-	-	-	-	-	-	-	-	-	-	-	36

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-48. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Brunswick, GA

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	16	4	1	2	6	8	-	3	1	3	-	3	-	-	-	-	-	-	47
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	1	-	-	1	1	-	-	3	4	-	-	-	-	-	-	-	-	-	10
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	1	2	3	7	1	-	1	10	9	-	-	-	-	-	-	-	-	-	34
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	1	53	40	11	17	-	-	-	-	-	-	-	-	-	-	-	-	122
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	18	8	58	53	19	25	2	16	14	3	-	3	-	-	-	-	-	-	219
<u>2002 Total arrivals</u>																			
Bulk Carrier	31	10	1	7	8	13	1	7	6	4	-	6	1	-	-	-	-	-	95
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	3	-	-	6	2	-	-	9	12	-	1	-	-	-	-	-	-	-	33
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	4	3	9	8	2	-	2	15	19	1	-	-	-	-	-	-	-	-	63
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Ro-Ro Cargo Ship	-	1	119	89	28	41	1	2	1	1	-	-	-	-	-	-	-	-	283
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	3
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	38	15	131	117	41	54	5	33	38	6	1	6	1	-	-	-	-	-	486
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	18	2	-	4	1	6	-	1	6	3	-	1	-	-	-	-	-	-	42
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	1	1	-	3	8	-	-	-	-	-	-	-	-	-	13
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	2	5	2	1	-	1	4	8	-	-	-	-	-	-	-	-	-	25
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Ro-Ro Cargo Ship	-	-	57	39	9	14	-	-	3	-	-	-	-	-	-	-	-	-	122
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	4
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20	5	67	45	12	22	4	8	25	3	-	1	-	-	-	-	-	-	212
<u>2003 Total arrivals</u>																			
Bulk Carrier	36	5	1	11	1	12	1	3	10	5	1	2	-	-	-	-	-	-	88
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	5	-	-	-	1	1	-	6	16	-	-	1	-	-	-	-	-	-	30
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	6	6	8	1	4	2	9	19	-	-	-	-	-	-	-	-	-	57
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	2	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Ro-Ro Cargo Ship	-	-	126	68	27	36	1	-	7	-	-	-	-	-	-	-	-	-	265
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	1	3	-	-	-	-	1	-	-	-	-	-	-	5
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	43	13	142	89	30	54	7	18	52	5	1	4	-	-	-	-	-	-	458

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-49. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Fernandina, FL

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	16	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-50. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Fernandina, FL

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	15	24	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	19	9	3	-	-	-	-	3	3	2	-	-	-	-	-	-	-	-	39
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	34	33	15	1	-	-	-	3	3	2	1	-	-	-	-	-	-	-	92
<u>2002 Total arrivals</u>																			
Bulk Carrier	1	-	2	2	-	-	-	-	2	-	2	-	-	-	-	-	-	-	9
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	42	64	6	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	114
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	43	22	16	3	-	-	-	6	12	4	-	-	-	-	-	-	-	-	106
Passenger Ship	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	92	86	55	5	-	-	-	6	15	4	3	-	-	-	-	-	-	-	266
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	3
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	3	32	4	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	40
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	15	4	5	2	-	-	-	2	3	3	-	-	-	-	-	-	-	-	34
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	18	36	21	2	-	-	-	3	4	3	2	-	-	-	-	-	-	-	89
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	1	1	-	-	-	1	1	1	-	4	-	-	-	-	-	-	-	9
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	5	68	9	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	84
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	40	27	28	2	-	-	-	3	9	9	-	-	-	-	-	-	-	-	118
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	5	28	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	46	103	66	6	-	-	1	4	12	9	5	-	-	-	-	-	-	-	252

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-51. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Jacksonville, FL

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	16	47	2	-	-	-	-	-	-	-	-	-	-	-	-	65
Freight Barge	9	7	22	14	1	-	-	-	-	-	1	-	-	-	-	-	-	-	54
General Dry Cargo Ship	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Passenger Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	41	2	-	-	-	-	-	-	-	-	-	-	-	-	-	44
Tank Barge	-	3	-	1	-	3	1	-	-	-	-	-	-	-	-	-	-	-	8
Tank Ship	2	-	-	-	-	-	-	7	-	4	1	-	-	-	-	-	-	-	14
Towing Vessel	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	78	10	23	72	61	5	3	7	-	4	2	-	-	-	-	-	-	-	265
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	1	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	6
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	35	130	17	-	-	-	-	-	-	-	-	-	-	-	-	182
Freight Barge	26	14	77	69	9	-	1	-	-	-	8	-	-	-	-	-	-	-	204
General Dry Cargo Ship	-	1	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Passenger Ship	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	1	131	9	-	-	-	-	-	-	-	-	-	-	-	-	-	141
Tank Barge	-	4	1	9	-	10	5	-	-	9	-	-	-	-	-	-	-	-	38
Tank Ship	3	-	-	-	-	-	-	17	-	14	1	-	-	-	-	-	-	-	35
Towing Vessel	279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	279
Other a/	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Total	319	20	79	244	160	27	11	17	-	23	9	-	-	-	-	-	-	-	909
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	9	29	8	-	-	-	-	-	-	-	-	-	-	-	-	46
Freight Barge	2	7	30	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
General Dry Cargo Ship	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
Passenger Ship	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	27	2	-	1	-	-	-	-	-	-	-	-	-	-	-	30
Tank Barge	-	-	-	4	-	1	2	-	-	-	-	-	-	-	-	-	-	-	7
Tank Ship	2	-	-	-	-	-	2	7	-	14	-	-	-	-	-	-	-	-	25
Towing Vessel	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	118	7	30	62	31	12	5	7	-	14	-	-	-	-	-	-	-	-	286
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	11
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	25	91	25	-	-	-	-	1	-	-	-	-	-	-	-	142
Freight Barge	4	11	107	75	1	-	1	-	-	-	1	-	-	-	-	-	-	-	200
General Dry Cargo Ship	-	-	1	-	1	11	3	-	-	-	-	-	-	-	-	-	-	-	16
Passenger Ship	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	3	-	95	10	8	1	-	-	-	-	-	-	-	-	-	-	-	117
Tank Barge	-	-	-	4	1	2	2	-	-	-	-	-	-	-	-	-	-	-	9
Tank Ship	4	-	-	-	-	-	12	19	2	43	-	-	-	-	-	-	-	-	80
Towing Vessel	291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	291
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	312	14	108	199	104	46	30	19	2	43	2	-	-	-	-	-	-	-	879

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-52. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Jacksonville, FL

Year and period	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	2	8	5	-	7	10	5	5	5	3	5	6	-	-	-	-	-	61
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	2
Container Ship	14	50	3	4	3	7	19	2	7	4	11	-	-	-	-	-	-	-	124
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	45	30	6	3	1	2	-	3	14	9	-	-	-	-	-	-	-	-	113
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Ro-Ro Cargo Ship	4	-	67	38	16	13	-	1	-	-	1	-	-	-	-	-	-	-	140
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	-	5	3	1	4	2	11	9	26	5	2	-	-	-	-	-	-	69
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	65	85	89	53	21	33	31	22	36	45	20	7	6	-	-	-	-	-	513
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	4	17	13	7	16	15	14	10	9	17	14	27	-	-	-	-	-	163
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	4
Container Ship	44	151	4	18	3	20	60	2	28	19	41	-	-	-	-	-	-	-	390
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	127	80	16	4	4	3	1	3	34	17	-	-	-	-	-	-	-	-	289
Passenger Ship	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Refrigerated Cargo Ship	-	11	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Ro-Ro Cargo Ship	9	-	205	139	63	47	3	7	-	1	1	-	-	-	-	-	-	-	475
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	1	1	7	12	9	9	9	36	41	72	12	20	1	-	1	-	-	-	231
Towing Vessel	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Other a/	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	184	248	252	186	87	95	88	62	114	121	71	34	28	-	1	-	-	-	1,571
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	1	5	6	1	7	3	2	13	14	2	4	6	-	-	-	-	-	64
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	19	42	1	7	-	3	17	-	15	6	11	-	-	-	-	-	-	-	121
Freight Barge	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
General Dry Cargo Ship	31	29	4	-	4	-	2	3	8	5	-	-	-	-	-	-	-	-	86
Passenger Ship	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Refrigerated Cargo Ship	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Ro-Ro Cargo Ship	7	-	70	57	20	4	-	-	1	-	-	-	-	-	-	-	-	-	159
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	7	-	-	2	1	3	-	19	19	19	1	6	-	-	-	1	-	-	78
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Total	71	76	81	72	26	17	22	24	56	44	14	10	6	-	-	1	-	-	520
<u>2003 Total arrivals</u>																			
Bulk Carrier	2	4	8	11	2	26	4	9	29	34	15	13	14	-	-	-	-	-	171
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	-	-	5
Container Ship	80	105	3	9	2	17	52	6	38	19	40	-	-	-	-	-	-	-	371
Freight Barge	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
General Dry Cargo Ship	119	71	16	3	17	1	5	6	17	12	-	-	-	-	-	-	-	-	267
Passenger Ship	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	6	4	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Ro-Ro Cargo Ship	8	2	200	167	65	6	2	1	2	2	-	-	-	-	-	-	-	-	455
Tank Barge	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Tank Ship	10	1	5	5	8	8	-	42	49	78	9	23	1	1	-	1	-	-	241
Towing Vessel	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Other a/	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Total	232	195	236	195	96	58	63	65	135	149	64	36	15	1	-	1	-	-	1,541

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-53. Arrivals of U.S. Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Port Canaveral, FL

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
General Dry Cargo Ship	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Passenger Ship	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Tank Ship	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4
Towing Vessel	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Other a/	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	20	2	-	2	-	-	-	4	-	-	-	-	-	-	-	-	-	-	28
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
General Dry Cargo Ship	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Passenger Ship	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Tank Barge	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	3
Tank Ship	-	-	-	-	-	-	4	1	-	1	-	-	-	-	-	-	-	-	6
Towing Vessel	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	42	-	-	1	1	-	5	1	-	1	-	2	-	-	-	-	-	-	53

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Table E-54. Arrivals of Foreign Flag Vessels 150 GRT and Above by ANPR Port Area and Vessel DWT, 2002 and 2003
ANPR Port Area: Port Canaveral, FL

Year and period	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
<u>2002 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2002 Total arrivals</u>																			
Bulk Carrier	-	35	33	17	2	19	4	17	5	2	-	-	1	-	-	-	-	-	135
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2
Container Ship	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	10
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	2	16	31	2	3	-	-	4	8	-	-	-	-	-	-	-	-	-	66
Passenger Ship	11	214	163	55	2	-	-	-	-	-	-	-	-	-	-	-	-	-	445
Refrigerated Cargo Ship	-	38	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43
Ro-Ro Cargo Ship	-	5	6	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	13
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	2	-	4	-	8	4	10	-	8	2	1	1	-	-	-	40
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	13	308	238	76	7	25	4	34	22	12	1	9	3	1	1	-	-	-	754
<u>2003 Restricted period arrivals</u>																			
Bulk Carrier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Container Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Passenger Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigerated Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ro-Ro Cargo Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>2003 Total arrivals</u>																			
Bulk Carrier	5	33	4	11	7	20	5	14	8	6	4	-	-	-	-	-	-	-	117
Combination Carrier (e.g. OBO)	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Container Ship	4	1	1	-	-	-	2	2	7	-	-	-	-	-	-	1	-	-	18
Freight Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Dry Cargo Ship	9	19	22	6	-	1	4	2	10	3	-	-	-	-	-	-	-	-	76
Passenger Ship	102	234	197	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	561
Refrigerated Cargo Ship	-	43	4	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	49
Ro-Ro Cargo Ship	1	2	27	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	35
Tank Barge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Ship	-	-	1	-	-	-	-	1	2	6	4	5	-	1	-	1	-	-	21
Towing Vessel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other a/	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	122	332	256	46	9	25	11	21	27	15	8	5	-	1	-	2	-	-	880

a/ Other includes fishing vessels, industrial vessels, research vessels, school ships.

Source: Prepared by Nathan Associates based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports, 2002-2003.

Appendix F

ESTIMATED DELAY PER
VESSEL ARRIVAL AT
ALTERNATIVE RESTRICTED
SPEEDS

Table F-1. Bulk Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	2.0	2.0	-	-	-	-	-	-	17.9	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	9.6	13.1	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	6.0	-	-	11.5	15.7	15.7	21.4	21.4	22.3	-	-	-	-	-
Providence, RI	-	-	-	2.5	6.0	6.0	11.5	11.5	15.7	15.7	-	-	-	-	-	-	-	-
New London, CT	-	-	2.5	2.5	-	-	-	11.5	15.7	15.7	21.4	-	-	-	-	-	-	-
New Haven, CT	-	-	2.5	2.5	6.0	6.0	11.5	11.5	15.7	15.7	21.4	21.4	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	15.7	21.4	21.4	22.3	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	-	1.9	1.9	4.6	4.6	8.9	8.9	12.1	12.1	16.6	16.6	17.3	17.3	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	-	2.3	2.3	5.5	5.5	10.6	10.6	14.4	14.4	19.6	19.6	20.5	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	2.2	2.2	5.4	5.4	10.4	10.4	14.2	14.2	19.4	19.4	20.2	20.2	-	20.2	20.2	20.2
Hampton Roads, VA	-	-	2.2	2.2	5.4	5.4	10.4	10.4	14.2	14.2	19.4	19.4	20.2	20.2	20.2	20.2	20.2	20.2
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	3.7	3.7	-	-	-	9.6	13.1	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	1.3	1.3	3.2	3.2	6.1	6.1	8.3	8.3	11.4	-	11.8	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	2.0	2.0	-	4.9	9.4	9.4	12.7	-	17.4	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	-	1.0	1.0	2.5	2.5	4.8	4.8	6.5	6.5	8.9	8.9	9.3	9.3	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	-	1.3	1.3	3.1	3.1	5.9	5.9	8.0	8.0	10.9	-	11.4	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	1.4	1.4	3.5	3.5	-	6.7	9.0	9.0	-	12.4	-	-	-	-	-	-
Fernandina, FL	-	-	1.6	1.6	-	-	-	7.7	-	-	14.3	-	-	-	-	-	-	-
Jacksonville, FL	-	-	1.6	1.6	4.0	4.0	7.6	7.6	10.3	10.3	14.1	14.1	14.7	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-2 Combination Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	21.4	-	22.3	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	-	-	-	-	-	-	12.1	16.6	16.6	17.3	17.3	17.3	-	-	-
Mid-Atlantic Delaware Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	20.5	20.5	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	10.4	-	14.2	-	-	20.2	20.2	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	20.2	20.2	20.2	20.2	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	8.3	-	-	11.8	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	5.9	-	8.0	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	10.3	10.3	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-3. Containerships: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	30.2	-	43.7	47.4	-	-	54.3	55.9	57.2	59.0	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	36.2	-	52.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	60.2	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	8.5	28.0	35.8	40.6	44.0	46.5	48.6	50.4	51.8	53.1	54.8	56.6	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	10.1	33.2	42.5	48.1	52.1	55.2	57.6	59.7	61.4	63.0	64.9	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	10.0	32.8	-	47.5	51.4	54.5	56.9	58.9	60.7	62.2	64.1	-	-	-	-	-	-	-
Hampton Roads, VA	10.0	32.8	41.9	47.5	51.4	54.5	56.9	58.9	60.7	62.2	64.1	66.2	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	6.7	-	-	-	34.7	36.7	-	-	40.9	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	5.8	19.2	24.5	27.8	30.1	31.9	33.3	34.5	35.5	36.4	37.5	38.8	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	55.9	57.6	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	4.6	15.1	19.3	21.9	23.7	25.1	26.2	27.1	27.9	28.6	29.5	30.5	-	32.0	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	5.6	18.5	23.6	26.8	29.0	30.7	32.1	33.2	34.2	35.0	36.1	37.3	-	39.2	-	-	-	-
Southeastern US																		
Brunswick, GA	6.4	-	-	30.3	32.8	34.7	-	37.5	38.6	-	-	-	-	-	-	-	-	-
Fernandina, FL	7.4	24.1	30.9	-	-	-	-	-	44.7	-	-	-	-	-	-	-	-	-
Jacksonville, FL	7.3	23.9	30.6	34.6	37.5	39.7	41.5	43.0	44.2	45.3	46.7	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-4. Freight Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	42.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	0.6	-	-	38.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
	0.6	21.4	30.0	35.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	21.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
	-	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.4	15.4	21.6	25.4	28.1	-	-	-	-	-	37.0	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-5. General Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	0.5	19.4	27.2	-	-	-	-	42.1	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	0.6	23.3	32.7	-	42.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	0.6	23.3	32.7	-	42.6	45.8	-	50.5	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	38.5	-	-	48.4	50.5	52.4	54.0	-	-	-	-	-	-	-	-
New Haven, CT	-	23.3	32.7	38.5	42.6	45.8	-	-	52.4	54.0	-	-	-	-	-	-	-	-
Bridgeport, CT	-	23.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	0.5	18.0	25.3	29.8	33.0	35.4	37.4	39.1	40.5	41.8	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	0.6	21.4	30.0	35.3	39.1	42.0	44.3	46.3	48.0	49.5	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	0.5	21.1	29.6	34.8	38.6	41.4	43.8	45.7	47.4	48.9	-	-	-	-	-	-	-	-
Hampton Roads, VA	0.5	21.1	29.6	34.8	38.6	41.4	43.8	45.7	47.4	48.9	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	0.4	14.2	19.9	23.5	26.0	27.9	-	30.8	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	0.3	12.4	17.3	20.4	22.6	24.3	25.6	26.8	27.8	28.6	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	19.0	-	-	-	-	-	-	42.6	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	0.3	9.7	13.6	16.0	17.8	19.1	20.2	21.1	21.8	22.5	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	0.3	11.9	16.7	19.6	21.7	23.4	24.7	25.8	26.7	27.5	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	0.3	13.5	18.9	22.2	24.6	-	27.9	29.1	30.2	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.4	15.6	21.8	25.7	-	-	-	33.7	34.9	36.0	-	-	-	-	-	-	-	-
Jacksonville, FL	0.4	15.4	21.6	25.4	28.1	30.2	31.9	33.4	34.6	35.6	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-6. Passenger Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	31.3	41.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	37.5	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	37.5	50.0	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	37.5	50.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	29.0	38.7	46.4	52.7	58.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	34.4	45.8	55.0	-	68.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	33.9	45.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	33.9	45.3	54.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	15.6	20.8	25.0	28.4	31.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	19.1	-	-	-	38.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	25.0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	24.8	33.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-7. Refrigerated Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	30.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	30.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	36.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	36.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	46.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	46.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	28.0	35.8	-	-	46.5	-	-	-	-	54.8	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	10.1	33.2	42.5	48.1	52.1	55.2	57.6	-	-	-	64.9	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	32.8	41.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	32.8	41.9	-	-	54.5	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	19.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	15.1	19.3	21.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	30.7	-	-	-	-	36.1	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	20.9	26.7	30.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	30.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	23.9	30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-8. Ro-Ro Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	9.2	-	38.6	43.7	47.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	46.3	52.5	56.8	-	-	-	-	68.7	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	52.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	11.0	-	-	52.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	8.5	28.0	35.8	40.6	44.0	46.5	48.6	50.4	51.8	53.1	54.8	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	10.1	33.2	42.5	48.1	52.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	10.0	32.8	41.9	47.5	51.4	54.5	56.9	58.9	60.7	62.2	64.1	-	-	-	-	-	-	-
Hampton Roads, VA	10.0	32.8	41.9	47.5	51.4	54.5	56.9	58.9	60.7	-	64.1	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	28.3	32.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	5.8	19.2	24.5	27.8	30.1	-	33.3	-	35.5	-	37.5	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	42.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	4.6	15.1	19.3	21.9	23.7	25.1	26.2	27.1	27.9	28.6	29.5	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	5.6	18.5	23.6	26.8	29.0	30.7	32.1	33.2	34.2	35.0	36.1	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	20.9	26.7	30.3	32.8	34.7	-	-	38.6	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	7.3	-	30.6	34.6	37.5	39.7	41.5	43.0	44.2	-	46.7	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-9. Tank Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	15.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	14.1	18.5	20.5	-	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	14.1	18.5	20.5	21.8	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	14.1	18.5	20.5	21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	14.1	18.5	20.5	21.8	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	10.9	14.3	15.9	-	-	18.2	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	12.9	17.0	18.8	20.0	-	21.6	22.2	-	-	23.5	24.0	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	12.8	16.8	18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	9.8	10.9	11.6	12.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	7.7	8.6	9.1	9.5	-	10.1	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	9.4	10.5	11.1	-	-	-	-	-	13.1	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	12.2	-	14.4	-	15.5	16.0	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-10. Tankers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	11.8	-	17.1	-	-	19.6	20.2	20.6	21.0	21.4	21.8	22.3	-	-	-	-	-	25.2
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	39.3	40.2	41.0	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	20.5	-	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	14.1	18.5	20.5	-	-	23.6	24.2	24.7	25.2	25.6	26.2	26.8	27.3	-	-	-	-	-
New London, CT	-	-	-	21.8	-	-	24.2	-	-	25.6	-	-	-	-	-	-	-	-
New Haven, CT	14.1	-	20.5	21.8	-	23.6	24.2	24.7	25.2	25.6	26.2	-	-	-	28.2	-	-	-
Bridgeport, CT	14.1	-	-	-	-	-	24.2	24.7	-	25.6	-	26.8	-	-	-	-	29.5	-
Long Island, NY	14.1	-	-	21.8	-	-	-	24.7	-	25.6	26.2	26.8	27.3	-	28.2	28.7	29.5	30.2
Mid-Atlantic Ports of New York/New Jersey																		
	10.9	14.3	15.9	16.9	17.6	18.2	18.7	19.1	19.5	19.8	20.2	20.7	21.1	21.5	21.8	22.2	22.8	23.3
Mid-Atlantic Delaware Bay																		
	12.9	17.0	18.8	20.0	20.9	21.6	22.2	22.7	23.1	23.5	24.0	24.6	25.0	25.5	25.8	26.3	27.0	27.7
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	12.8	16.8	18.6	19.8	20.6	21.3	21.9	22.4	22.8	23.2	23.7	24.2	24.7	-	25.5	26.0	-	27.3
Hampton Roads, VA	12.8	16.8	18.6	19.8	20.6	21.3	21.9	22.4	22.8	23.2	23.7	24.2	24.7	25.1	25.5	26.0	26.7	27.3
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	12.5	13.3	-	14.4	14.8	15.1	-	-	-	16.3	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	7.5	9.8	10.9	11.6	12.1	12.5	12.8	13.1	13.4	13.6	13.9	14.2	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	5.9	7.7	8.6	9.1	9.5	9.8	10.1	10.3	10.5	10.7	10.9	11.2	-	11.6	-	-	-	-
Mid-Atlantic Savannah, GA																		
	7.2	9.4	10.5	11.1	11.6	12.0	12.3	12.6	12.9	13.1	13.3	13.7	13.9	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	10.7	-	-	-	13.6	14.0	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	9.3	-	13.5	14.4	15.0	15.5	16.0	16.3	16.6	16.9	17.3	17.7	-	-	-	19.0	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-11. Towing Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	9.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-12. Other Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 12 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-13. Bulk Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	27.0	27.0	-	-	-	-	-	-	42.9	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	34.6	38.1	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	36.0	-	-	41.5	45.7	45.7	51.4	51.4	52.3	-	-	-	-	-
Providence, RI	-	24.8	-	32.5	36.0	36.0	41.5	41.5	45.7	45.7	-	-	-	-	-	-	-	-
New London, CT	-	-	32.5	32.5	-	-	-	41.5	45.7	45.7	51.4	-	-	-	-	-	-	-
New Haven, CT	-	24.8	32.5	32.5	36.0	36.0	41.5	41.5	45.7	45.7	51.4	51.4	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	45.7	51.4	51.4	52.3	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	19.2	19.2	25.1	25.1	27.8	27.8	32.1	32.1	35.3	35.3	39.8	39.8	40.5	40.5	-	-	-	-
Mid-Atlantic Delaware Bay																		
	22.8	22.8	29.8	29.8	33.0	33.0	38.1	38.1	41.9	41.9	47.1	47.1	48.0	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	22.5	22.5	29.4	29.4	32.6	32.6	37.6	37.6	41.3	41.3	46.5	46.5	47.4	47.4	-	47.4	47.4	47.4
Hampton Roads, VA	22.5	22.5	29.4	29.4	32.6	32.6	37.6	37.6	41.3	41.3	46.5	46.5	47.4	47.4	47.4	47.4	47.4	47.4
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	15.1	-	-	22.0	22.0	-	-	-	27.9	31.4	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	13.2	13.2	17.2	17.2	19.1	19.1	22.0	22.0	24.2	24.2	27.3	-	27.7	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	20.2	26.4	26.4	-	29.3	33.8	33.8	37.1	-	41.8	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	10.3	10.3	13.5	13.5	15.0	15.0	17.3	17.3	19.0	19.0	21.4	21.4	21.8	21.8	-	-	-	-
Mid-Atlantic Savannah, GA																		
	12.7	12.7	16.6	16.6	18.4	18.4	21.2	21.2	23.3	23.3	26.2	-	26.7	-	-	-	-	-
Southeastern US																		
Brunswick, GA	14.3	14.3	18.7	18.7	20.8	20.8	-	24.0	26.3	26.3	-	29.7	-	-	-	-	-	-
Fernandina, FL	-	-	21.6	21.6	-	-	-	27.7	-	-	34.3	-	-	-	-	-	-	-
Jacksonville, FL	-	16.4	21.4	21.4	23.8	23.8	27.4	27.4	30.1	30.1	33.9	33.9	34.5	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-14 Combination Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	51.4	-	52.3	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	-	-	-	-	-	-	35.3	39.8	39.8	40.5	40.5	40.5	-	-	-
Mid-Atlantic Delaware Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	48.0	48.0	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	37.6	-	41.3	-	-	47.4	47.4	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	47.4	47.4	47.4	47.4	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	13.2	-	-	-	-	-	-	-	24.2	-	-	27.7	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	12.7	-	-	-	-	-	21.2	-	23.3	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	30.1	30.1	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-15. Containerships: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	55.2	-	68.7	72.4	-	-	79.3	80.9	82.2	84.0	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	66.2	-	82.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	90.2	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	31.7	51.2	59.0	63.8	67.2	69.7	71.8	73.6	75.0	76.3	78.0	79.8	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	37.6	60.7	70.0	75.6	79.6	82.7	85.1	87.2	88.9	90.5	92.4	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	37.1	59.9	-	74.6	78.6	81.6	84.0	86.1	87.8	89.3	91.2	-	-	-	-	-	-	-
Hampton Roads, VA	37.1	59.9	69.1	74.6	78.6	81.6	84.0	86.1	87.8	89.3	91.2	93.4	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	25.0	-	-	-	53.0	55.0	-	-	59.2	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	21.7	35.1	40.4	43.7	46.0	47.8	49.2	50.4	51.4	52.3	53.4	54.7	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	80.3	82.0	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	17.1	27.6	31.8	34.4	36.2	37.6	38.7	39.6	40.4	41.1	42.0	43.0	-	44.5	-	-	-	-
Mid-Atlantic Savannah, GA																		
	20.9	33.8	38.9	42.1	44.3	46.0	47.4	48.5	49.5	50.3	51.4	52.6	-	54.5	-	-	-	-
Southeastern US																		
Brunswick, GA	23.7	-	-	47.6	50.1	52.0	-	54.8	55.9	-	-	-	-	-	-	-	-	-
Fernandina, FL	27.4	44.1	50.9	-	-	-	-	-	64.7	-	-	-	-	-	-	-	-	-
Jacksonville, FL	27.1	43.7	50.4	54.4	57.3	59.5	61.3	62.8	64.0	65.1	66.5	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-16 Freight Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	72.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	30.6	-	-	68.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
	28.1	48.9	57.5	62.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	48.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
	-	-	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	20.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	20.2	35.2	41.4	45.2	47.9	-	-	-	-	-	56.8	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-17. General Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	25.5	44.4	52.2	-	-	-	-	67.1	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	30.6	53.3	62.7	-	72.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	30.6	53.3	62.7	-	72.6	75.8	-	80.5	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	68.5	-	-	78.4	80.5	82.4	84.0	-	-	-	-	-	-	-	-
New Haven, CT	-	53.3	62.7	68.5	72.6	75.8	-	-	82.4	84.0	-	-	-	-	-	-	-	-
Bridgeport, CT	-	53.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	23.7	41.2	48.5	53.0	56.2	58.6	60.6	62.3	63.7	65.0	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	28.1	48.9	57.5	62.8	66.6	69.5	71.8	73.8	75.5	77.0	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	27.7	48.3	56.7	62.0	65.7	68.6	70.9	72.9	74.6	76.0	-	-	-	-	-	-	-	-
Hampton Roads, VA	27.7	48.3	56.7	62.0	65.7	68.6	70.9	72.9	74.6	76.0	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	18.7	32.5	38.2	41.8	44.3	46.2	-	49.1	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	16.2	28.3	33.2	36.3	38.5	40.2	41.5	42.7	43.7	44.5	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	43.4	-	-	-	-	-	-	67.0	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	12.8	22.2	26.1	28.5	30.3	31.6	32.7	33.6	34.3	35.0	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	15.6	27.2	32.0	34.9	37.0	38.7	40.0	41.1	42.0	42.8	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	17.6	30.8	36.2	39.5	41.9	-	45.2	46.4	47.5	-	-	-	-	-	-	-	-	-
Fernandina, FL	20.4	35.6	41.8	45.7	-	-	-	53.7	54.9	56.0	-	-	-	-	-	-	-	-
Jacksonville, FL	20.2	35.2	41.4	45.2	47.9	50.0	51.7	53.2	54.4	55.4	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-18. Passenger Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	56.3	66.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	56.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	67.5	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	67.5	80.0	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	67.5	80.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	67.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	67.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	67.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	52.2	61.9	69.6	75.9	81.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	61.9	73.3	82.5	-	96.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	61.1	72.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	61.1	72.4	81.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	28.1	33.3	37.5	40.9	43.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	34.4	-	-	-	53.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	38.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	45.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	44.6	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-19.. Refrigerated Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	55.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	55.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	66.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	66.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	76.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	76.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	51.2	59.0	-	-	69.7	-	-	-	-	78.0	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	37.6	60.7	70.0	75.6	79.6	82.7	85.1	-	-	-	92.4	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	59.9	69.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	59.9	69.1	-	-	81.6	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	35.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	27.6	31.8	34.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	46.0	-	-	-	-	51.4	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	38.2	44.0	47.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	50.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	43.7	50.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-20. Ro-Ro Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	34.2	-	63.6	68.7	72.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	76.3	82.5	86.8	-	-	-	-	98.7	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	82.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	41.0	-	-	82.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	31.7	51.2	59.0	63.8	67.2	69.7	71.8	73.6	75.0	76.3	78.0	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	37.6	60.7	70.0	75.6	79.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	37.1	59.9	69.1	74.6	78.6	81.6	84.0	86.1	87.8	89.3	91.2	-	-	-	-	-	-	-
Hampton Roads, VA	37.1	59.9	69.1	74.6	78.6	81.6	84.0	86.1	87.8	-	91.2	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	46.6	50.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	21.7	35.1	40.4	43.7	46.0	-	49.2	-	51.4	-	53.4	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	67.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	17.1	27.6	31.8	34.4	36.2	37.6	38.7	39.6	40.4	41.1	42.0	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	20.9	33.8	38.9	42.1	44.3	46.0	47.4	48.5	49.5	50.3	51.4	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	38.2	44.0	47.6	50.1	52.0	-	-	55.9	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	27.1	-	50.4	54.4	57.3	59.5	61.3	62.8	64.0	-	66.5	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-21. Tank Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	40.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	44.1	48.5	50.5	-	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	44.1	48.5	50.5	51.8	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	44.1	48.5	50.5	51.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	44.1	48.5	50.5	51.8	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	34.1	37.5	39.1	-	-	41.4	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	40.4	44.5	46.3	47.5	-	49.1	49.7	-	-	51.0	51.5	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	39.9	43.9	45.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	45.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	25.7	26.8	27.5	28.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	20.2	21.1	21.6	22.0	-	22.6	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	24.7	25.8	26.4	-	-	-	-	-	28.4	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	32.0	-	34.2	-	35.3	35.8	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-22. Tankers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	36.8	-	42.1	-	-	44.6	45.2	45.6	46.0	46.4	46.8	47.3	-	-	-	-	-	50.2
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	84.3	85.2	86.0	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	50.5	-	52.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	44.1	48.5	50.5	-	-	53.6	54.2	54.7	55.2	55.6	56.2	56.8	57.3	-	-	-	-	-
New London, CT	-	-	-	51.8	-	-	54.2	-	-	55.6	-	-	-	-	-	-	-	-
New Haven, CT	44.1	-	50.5	51.8	-	53.6	54.2	54.7	55.2	55.6	56.2	-	-	-	58.2	-	-	-
Bridgeport, CT	44.1	-	-	-	-	-	54.2	54.7	-	55.6	-	56.8	-	-	-	-	59.5	-
Long Island, NY	44.1	-	-	51.8	-	-	-	54.7	-	55.6	56.2	56.8	57.3	-	58.2	58.7	59.5	60.2
Mid-Atlantic Ports of New York/New Jersey																		
	34.1	37.5	39.1	40.1	40.8	41.4	41.9	42.3	42.7	43.0	43.4	43.9	44.3	44.7	45.0	45.4	46.0	46.5
Mid-Atlantic Delaware Bay																		
	40.4	44.5	46.3	47.5	48.4	49.1	49.7	50.2	50.6	51.0	51.5	52.1	52.5	53.0	53.3	53.8	54.5	55.2
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	39.9	43.9	45.7	46.9	47.8	48.5	49.0	49.5	50.0	50.3	50.8	51.4	51.9	-	52.7	53.1	-	54.5
Hampton Roads, VA	39.9	43.9	45.7	46.9	47.8	48.5	49.0	49.5	50.0	50.3	50.8	51.4	51.9	52.3	52.7	53.1	53.8	54.5
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	30.8	31.6	-	32.7	33.1	33.4	-	-	-	34.6	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	23.4	25.7	26.8	27.5	28.0	28.4	28.7	29.0	29.3	29.5	29.8	30.1	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	18.4	20.2	21.1	21.6	22.0	22.3	22.6	22.8	23.0	23.2	23.4	23.7	-	24.1	-	-	-	-
Mid-Atlantic Savannah, GA																		
	22.5	24.7	25.8	26.4	26.9	27.3	27.6	27.9	28.2	28.4	28.6	29.0	29.2	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	28.0	-	-	-	30.9	31.3	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	29.1	-	33.3	34.2	34.8	35.3	35.8	36.1	36.4	36.7	37.1	37.5	-	-	-	38.8	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-23. Towing Vessels:Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	44.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	44.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	44.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	34.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	40.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	39.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	39.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	23.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	29.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	29.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-24. Other Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 10 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	25.0	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	23.2	23.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	27.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	27.2	-	-	-	-	27.2	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	27.2	-	-	-	-	-	27.2	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	12.5	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	15.3	-	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	19.8	19.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-25. Bulk Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	13.4	13.4	-	-	-	-	-	-	29.2	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	21.0	24.4	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	19.6	-	-	25.2	29.3	29.3	35.1	35.1	36.0	-	-	-	-	-
Providence, RI	-	8.5	-	16.1	19.6	19.6	25.2	25.2	29.3	29.3	-	-	-	-	-	-	-	-
New London, CT	-	-	16.1	16.1	-	-	-	25.2	29.3	29.3	35.1	-	-	-	-	-	-	-
New Haven, CT	-	8.5	16.1	16.1	19.6	19.6	25.2	25.2	29.3	29.3	35.1	35.1	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	29.3	35.1	35.1	36.0	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	6.5	6.5	12.4	12.4	15.2	15.2	19.5	19.5	22.7	22.7	27.1	27.1	27.8	27.8	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	7.8	7.8	14.8	14.8	18.0	18.0	23.1	23.1	26.9	26.9	32.1	32.1	33.0	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	7.7	7.7	14.6	14.6	17.8	17.8	22.8	22.8	26.5	26.5	31.7	31.7	32.6	32.6	-	32.6	32.6	32.6
Hampton Roads, VA	7.7	7.7	14.6	14.6	17.8	17.8	22.8	22.8	26.5	26.5	31.7	31.7	32.6	32.6	32.6	32.6	32.6	32.6
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	5.2	-	-	12.0	12.0	-	-	-	17.9	21.4	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	4.5	4.5	8.5	8.5	10.4	10.4	13.3	13.3	15.5	15.5	18.6	-	19.1	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	6.9	13.1	13.1	-	16.0	20.5	20.5	23.8	-	28.5	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	3.5	3.5	6.7	6.7	8.2	8.2	10.5	10.5	12.2	12.2	14.6	14.6	15.0	15.0	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	4.3	4.3	8.2	8.2	10.0	10.0	12.8	12.8	14.9	14.9	17.9	-	18.3	-	-	-	-	-
Southeastern US																		
Brunswick, GA	4.9	4.9	9.3	9.3	11.3	11.3	-	14.5	16.9	16.9	-	20.2	-	-	-	-	-	-
Fernandina, FL	-	-	10.7	10.7	-	-	-	16.8	-	-	23.4	-	-	-	-	-	-	-
Jacksonville, FL	-	5.6	10.6	10.6	13.0	13.0	16.6	16.6	19.3	19.3	23.1	23.1	23.7	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-26 Combination Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	35.1	-	36.0	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	-	-	-	-	-	-	-	-	22.7	27.1	27.1	27.8	27.8	27.8	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.0	33.0	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	22.8	-	26.5	-	-	32.6	32.6	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	32.6	32.6	32.6	32.6	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	4.5	-	-	-	-	-	-	-	15.5	-	-	19.1	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	4.3	-	-	-	-	-	12.8	-	14.9	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	19.3	19.3	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-27. Containerships: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	41.5	-	55.1	58.7	-	-	65.6	67.2	68.6	70.4	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	49.9	-	66.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	73.8	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	19.1	38.6	46.4	51.1	54.5	57.1	59.2	60.9	62.4	63.7	65.3	67.2	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	22.6	45.7	55.0	60.6	64.6	67.7	70.1	72.2	73.9	75.5	77.4	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	22.3	45.1	-	59.8	63.8	66.8	69.2	71.3	73.0	74.5	76.4	-	-	-	-	-	-	-
Hampton Roads, VA	22.3	45.1	54.3	59.8	63.8	66.8	69.2	71.3	73.0	74.5	76.4	78.6	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	15.0	-	-	-	43.0	45.0	-	-	49.2	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	13.1	26.4	31.8	35.0	37.4	39.1	40.5	41.7	42.7	43.6	44.8	46.0	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	67.0	68.7	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	10.3	20.8	25.0	27.5	29.4	30.8	31.9	32.8	33.6	34.3	35.2	36.2	-	37.7	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	12.6	25.4	30.6	33.7	35.9	37.6	39.0	40.2	41.1	42.0	43.1	44.3	-	46.2	-	-	-	-
Southeastern US																		
Brunswick, GA	14.2	-	-	38.1	40.6	42.6	-	45.4	46.5	-	-	-	-	-	-	-	-	-
Fernandina, FL	16.4	33.2	40.0	-	-	-	-	-	53.8	-	-	-	-	-	-	-	-	-
Jacksonville, FL	16.3	32.9	39.6	43.6	46.5	48.7	50.5	52.0	53.2	54.3	55.7	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-28 Freight Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	56.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	14.2	-	-	52.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
	13.1	33.9	42.5	47.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	33.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	19.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	9.4	24.4	30.6	34.4	37.1	-	-	-	-	-	46.0	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-29. General Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	11.9	30.8	38.6	-	-	-	-	53.5	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	14.2	37.0	46.3	-	56.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	14.2	37.0	46.3	-	56.2	59.4	-	64.2	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	52.1	-	-	62.0	64.2	66.0	67.6	-	-	-	-	-	-	-	-
New Haven, CT	-	37.0	46.3	52.1	56.2	59.4	-	-	66.0	67.6	-	-	-	-	-	-	-	-
Bridgeport, CT	-	37.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	11.0	28.6	35.8	40.3	43.5	46.0	48.0	49.6	51.1	52.3	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	13.1	33.9	42.5	47.8	51.6	54.5	56.8	58.8	60.5	62.0	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	12.9	33.5	41.9	47.2	50.9	53.8	56.1	58.1	59.8	61.2	-	-	-	-	-	-	-	-
Hampton Roads, VA	12.9	33.5	41.9	47.2	50.9	53.8	56.1	58.1	59.8	61.2	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	8.7	22.6	28.3	31.8	34.3	36.3	-	39.1	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	7.5	19.6	24.6	27.6	29.8	31.5	32.9	34.0	35.0	35.9	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	30.1	-	-	-	-	-	-	53.7	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	5.9	15.4	19.3	21.7	23.4	24.8	25.8	26.7	27.5	28.2	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	7.3	18.9	23.6	26.6	28.7	30.3	31.6	32.7	33.7	34.5	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	8.2	21.3	26.7	30.1	32.4	-	35.8	37.0	38.1	-	-	-	-	-	-	-	-	-
Fernandina, FL	9.5	24.6	30.9	34.7	-	-	-	42.8	44.0	45.1	-	-	-	-	-	-	-	-
Jacksonville, FL	9.4	24.4	30.6	34.4	37.1	39.2	40.9	42.4	43.6	44.6	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-30. Passenger Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	42.6	53.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	42.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	51.1	63.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	51.1	63.6	73.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	51.1	63.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	51.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	51.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	51.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	39.5	49.2	56.9	63.3	68.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	46.9	58.3	67.5	-	81.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	46.3	57.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	46.3	57.6	66.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	21.3	26.5	30.7	34.1	36.9	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	26.1	-	-	-	45.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	29.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	34.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	33.8	42.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-31. Refrigerated Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	41.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	41.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	49.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	49.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	60.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	38.6	46.4	-	-	57.1	-	-	-	-	65.3	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	22.6	45.7	55.0	60.6	64.6	67.7	70.1	-	-	-	77.4	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	45.1	54.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	45.1	54.3	-	-	66.8	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	26.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	20.8	25.0	27.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	37.6	-	-	-	-	43.1	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	28.7	34.6	38.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	40.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	32.9	39.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-32. Ro-Ro Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	20.6	-	50.0	55.1	58.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	60.0	66.1	70.5	-	-	-	-	82.3	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	66.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	24.7	-	-	66.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	19.1	38.6	46.4	51.1	54.5	57.1	59.2	60.9	62.4	63.7	65.3	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	22.6	45.7	55.0	60.6	64.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	22.3	45.1	54.3	59.8	63.8	66.8	69.2	71.3	73.0	74.5	76.4	-	-	-	-	-	-	-
Hampton Roads, VA	22.3	45.1	54.3	59.8	63.8	66.8	69.2	71.3	73.0	-	76.4	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	36.6	40.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	13.1	26.4	31.8	35.0	37.4	-	40.5	-	42.7	-	44.8	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	53.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	10.3	20.8	25.0	27.5	29.4	30.8	31.9	32.8	33.6	34.3	35.2	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	12.6	25.4	30.6	33.7	35.9	37.6	39.0	40.2	41.1	42.0	43.1	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	28.7	34.6	38.1	40.6	42.6	-	-	46.5	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	16.3	-	39.6	43.6	46.5	48.7	50.5	52.0	53.2	-	55.7	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-33 Tank Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

[illegible]

Source: Prepared by Nathan Associates Inc.

Table F-34. Tankers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	23.1	-	28.5	-	-	31.0	31.5	32.0	32.4	32.7	33.2	33.7	-	-	-	-	-	36.5
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	59.7	60.6	61.4	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	34.2	-	36.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	27.7	32.2	34.2	-	-	37.2	37.8	38.4	38.8	39.3	39.8	40.4	41.0	-	-	-	-	-
New London, CT	-	-	-	35.5	-	-	37.8	-	-	39.3	-	-	-	-	-	-	-	-
New Haven, CT	27.7	-	34.2	35.5	-	37.2	37.8	38.4	38.8	39.3	39.8	-	-	-	41.8	-	-	-
Bridgeport, CT	27.7	-	-	-	-	-	37.8	38.4	-	39.3	-	40.4	-	-	-	-	43.1	-
Long Island, NY	27.7	-	-	35.5	-	-	-	38.4	-	39.3	39.8	40.4	41.0	-	41.8	42.4	43.1	43.8
Mid-Atlantic Ports of New York/New Jersey																		
	21.5	24.9	26.4	27.4	28.2	28.8	29.3	29.7	30.0	30.4	30.8	31.3	31.7	32.0	32.3	32.8	33.3	33.9
Mid-Atlantic Delaware Bay																		
	25.4	29.5	31.3	32.5	33.4	34.1	34.7	35.2	35.6	36.0	36.5	37.1	37.5	38.0	38.3	38.8	39.5	40.2
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	25.1	29.1	30.9	32.1	33.0	33.7	34.2	34.7	35.2	35.5	36.0	36.6	37.1	-	37.8	38.3	-	39.7
Hampton Roads, VA	25.1	29.1	30.9	32.1	33.0	33.7	34.2	34.7	35.2	35.5	36.0	36.6	37.1	37.5	37.8	38.3	39.0	39.7
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	20.8	21.6	-	22.7	23.1	23.4	-	-	-	24.7	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	14.7	17.0	18.1	18.8	19.3	19.7	20.0	20.3	20.6	20.8	21.1	21.4	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	11.6	13.4	14.2	14.8	15.2	15.5	15.8	16.0	16.2	16.4	16.6	16.8	-	17.3	-	-	-	-
Mid-Atlantic Savannah, GA																		
	14.1	16.4	17.4	18.1	18.6	19.0	19.3	19.6	19.8	20.0	20.3	20.6	20.9	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	18.5	-	-	-	21.4	21.8	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	18.3	-	22.5	23.4	24.0	24.5	25.0	25.3	25.6	25.9	26.3	26.7	-	-	-	28.0	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-35. Towing Vessels:Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	21.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	25.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	25.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	25.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	18.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-36. Other Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 11 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	11.4	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	10.5	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	12.3	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	12.3	-	-	-	-	-	12.3	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	5.7	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	7.0	-	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	9.0	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-37. Bulk Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	8.2	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	4.1	4.1	9.9	9.9	10.8	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	4.1	4.1	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	4.1	4.1	9.9	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	4.1	4.1	9.9	9.9	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	4.1	9.9	9.9	10.8	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	-	-	-	-	-	3.2	3.2	7.6	7.6	8.4	8.4	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	-	-	-	-	-	-	-	3.8	3.8	9.1	9.1	9.9	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	3.7	3.7	9.0	9.0	9.8	9.8	-	9.8	9.8	9.8
Hampton Roads, VA	-	-	-	-	-	-	-	-	3.7	3.7	9.0	9.0	9.8	9.8	9.8	9.8	9.8	9.8
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	2.5	6.0	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	2.2	2.2	5.2	-	5.7	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	3.4	-	8.0	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	-	-	-	-	-	1.7	1.7	4.1	4.1	4.5	4.5	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	-	2.1	2.1	5.0	-	5.5	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	2.4	2.4	-	5.7	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	6.6	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	2.7	2.7	6.5	6.5	7.1	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-38 Combination Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	9.9	-	10.8	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	-	-	-	-	-	-	3.2	7.6	7.6	8.4	8.4	8.4	-	-	-
Mid-Atlantic Delaware Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9	9.9	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	3.7	-	-	9.8	9.8	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	9.8	9.8	9.8	9.8	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	2.2	-	-	5.7	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	2.7	2.7	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-39. Containerships: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	20.6	-	34.1	37.7	-	-	44.6	46.2	47.6	49.4	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	24.7	-	40.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	48.6	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	19.1	26.9	31.7	35.0	37.6	39.7	41.4	42.9	44.2	45.8	47.7	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	22.6	31.9	37.5	41.5	44.6	47.1	49.1	50.9	52.4	54.3	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	22.3	-	37.1	41.0	44.0	46.5	48.5	50.2	51.7	53.7	-	-	-	-	-	-	-
Hampton Roads, VA	-	22.3	31.5	37.1	41.0	44.0	46.5	48.5	50.2	51.7	53.7	55.8	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	27.6	29.7	-	-	33.8	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	13.1	18.4	21.7	24.0	25.8	27.2	28.4	29.4	30.3	31.4	32.7	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	46.5	48.2	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	10.3	14.5	17.1	18.9	20.3	21.4	22.3	23.1	23.8	24.7	25.7	-	27.2	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	12.6	17.7	20.9	23.1	24.8	26.2	27.3	28.3	29.1	30.2	31.4	-	33.3	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	23.6	26.1	28.0	-	30.9	32.0	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	16.5	23.2	-	-	-	-	-	37.0	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	16.3	23.0	27.0	29.9	32.1	33.9	35.4	36.6	37.7	39.1	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-40 Freight Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	31.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	26.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	10.8	19.4	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	-	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	7.8	14.0	17.8	20.5	-	-	-	-	-	29.4	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-41. General Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	9.8	17.6	-	-	-	-	32.5	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	11.8	21.2	-	31.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	11.8	21.2	-	31.1	34.3	-	39.0	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	26.9	-	-	36.8	39.0	40.9	42.5	-	-	-	-	-	-	-	-
New Haven, CT	-	11.8	21.2	26.9	31.1	34.3	-	-	40.9	42.5	-	-	-	-	-	-	-	-
Bridgeport, CT	-	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	9.1	16.4	20.8	24.0	26.5	28.5	30.2	31.6	32.8	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	10.8	19.4	24.7	28.5	31.4	33.8	35.8	37.5	38.9	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	10.7	19.1	24.4	28.1	31.0	33.3	35.3	37.0	38.4	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	10.7	19.1	24.4	28.1	31.0	33.3	35.3	37.0	38.4	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	7.2	12.9	16.4	19.0	20.9	-	23.8	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	6.3	11.2	14.3	16.5	18.2	19.5	20.7	21.7	22.5	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	9.6	-	-	-	-	-	-	33.2	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	4.9	8.8	11.2	12.9	14.3	15.4	16.3	17.0	17.7	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	6.0	10.8	13.7	15.8	17.5	18.8	19.9	20.8	21.7	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	6.8	12.2	15.5	17.9	-	21.2	22.5	23.6	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	7.9	14.1	18.0	-	-	-	26.0	27.2	28.3	-	-	-	-	-	-	-	-
Jacksonville, FL	-	7.8	14.0	17.8	20.5	22.6	24.3	25.7	27.0	28.0	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-42. Passenger Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	21.6	32.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	26.0	38.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	26.0	38.5	48.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	26.0	38.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	20.1	29.7	37.5	43.8	49.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	23.8	35.3	44.4	-	58.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	23.5	34.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	23.5	34.8	43.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	10.8	16.0	20.2	23.6	26.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	13.2	-	-	-	32.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	17.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	17.1	25.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-43. Refrigerated Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	34.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	34.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	19.1	26.9	-	-	37.6	-	-	-	-	45.8	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	22.6	31.9	37.5	41.5	44.6	47.1	-	-	-	54.3	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	22.3	31.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	22.3	31.5	-	-	44.0	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	13.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	10.3	14.5	17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	24.8	-	-	-	-	30.2	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	14.2	20.1	23.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	23.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	16.3	23.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-44. Ro-Ro Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	29.0	34.1	37.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	34.8	40.9	45.3	-	-	-	-	57.1	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	40.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	40.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	19.1	26.9	31.7	35.0	37.6	39.7	41.4	42.9	44.2	45.8	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	22.6	31.9	37.5	41.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	22.3	31.5	37.1	41.0	44.0	46.5	48.5	50.2	51.7	53.7	-	-	-	-	-	-	-
Hampton Roads, VA	-	22.3	31.5	37.1	41.0	44.0	46.5	48.5	50.2	-	53.7	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	21.2	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	13.1	18.4	21.7	24.0	-	27.2	-	29.4	-	31.4	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	33.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	10.3	14.5	17.1	18.9	20.3	21.4	22.3	23.1	23.8	24.7	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	12.6	17.7	20.9	23.1	24.8	26.2	27.3	28.3	29.1	30.2	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	14.2	20.1	23.6	26.1	28.0	-	-	32.0	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	23.0	27.0	29.9	32.1	33.9	35.4	36.6	-	39.1	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-45 Tank Barges:Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	2.6	7.0	9.0	-	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	2.6	7.0	9.0	10.3	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	2.6	7.0	9.0	10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	2.6	7.0	9.0	10.3	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	2.0	5.4	7.0	-	-	9.3	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	2.4	6.4	8.2	9.4	-	11.0	11.6	-	-	12.9	13.4	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	2.3	6.3	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	3.7	4.8	5.5	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	2.9	3.7	4.3	4.7	-	5.3	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	3.6	4.6	5.2	-	-	-	-	-	7.2	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	4.6	-	6.8	-	7.9	8.4	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-46. Tankers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	2.1	-	7.5	-	-	10.0	10.5	11.0	11.4	11.7	12.2	12.7	-	-	-	-	-	15.5
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	21.9	22.9	23.7	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	9.0	-	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	2.6	7.0	9.0	-	-	12.0	12.7	13.2	13.7	14.1	14.6	15.3	15.8	-	-	-	-	-
New London, CT	-	-	-	10.3	-	-	12.7	-	-	14.1	-	-	-	-	-	-	-	-
New Haven, CT	2.6	-	9.0	10.3	-	12.0	12.7	13.2	13.7	14.1	14.6	-	-	-	16.6	-	-	-
Bridgeport, CT	2.6	-	-	-	-	-	12.7	13.2	-	14.1	-	15.3	-	-	-	-	17.9	-
Long Island, NY	2.6	-	-	10.3	-	-	-	13.2	-	14.1	14.6	15.3	15.8	-	16.6	17.2	17.9	18.7
Mid-Atlantic Ports of New York/New Jersey																		
	2.0	5.4	7.0	8.0	8.7	9.3	9.8	10.2	10.6	10.9	11.3	11.8	12.2	12.6	12.9	13.3	13.9	14.4
Mid-Atlantic Delaware Bay																		
	2.4	6.4	8.2	9.4	10.3	11.0	11.6	12.1	12.5	12.9	13.4	14.0	14.5	14.9	15.3	15.8	16.4	17.1
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	2.3	6.3	8.1	9.3	10.2	10.9	11.5	11.9	12.4	12.7	13.2	13.8	14.3	-	15.1	15.6	-	16.9
Hampton Roads, VA	2.3	6.3	8.1	9.3	10.2	10.9	11.5	11.9	12.4	12.7	13.2	13.8	14.3	14.7	15.1	15.6	16.2	16.9
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	5.5	6.3	-	7.3	7.7	8.0	-	-	-	9.3	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	1.4	3.7	4.8	5.5	6.0	6.4	6.7	7.0	7.2	7.5	7.8	8.1	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	1.1	2.9	3.7	4.3	4.7	5.0	5.3	5.5	5.7	5.9	6.1	6.4	-	6.8	-	-	-	-
Mid-Atlantic Savannah, GA																		
	1.3	3.6	4.6	5.2	5.7	6.1	6.5	6.7	7.0	7.2	7.5	7.8	8.0	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	4.0	-	-	-	6.9	7.3	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	1.7	-	5.9	6.8	7.4	7.9	8.4	8.7	9.0	9.3	9.7	10.1	-	-	-	11.3	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-47. Towing Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-48. Other Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 13 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-49. Bulk Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.7	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	-	0.8	0.8	0.8
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	0.8	0.8	0.8	0.8
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-50 Combination Carriers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.7	0.7	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	0.8	0.8	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-51. Containerships: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	12.3	-	25.9	29.5	-	-	36.4	38.0	39.4	41.2	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	14.8	-	31.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	38.8	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	11.4	19.2	24.0	27.4	30.0	32.0	33.8	35.3	36.5	38.2	40.0	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	13.6	22.8	28.5	32.5	35.5	38.0	40.0	41.8	43.3	45.3	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	13.4	-	28.1	32.0	35.1	37.5	39.5	41.3	42.8	44.7	-	-	-	-	-	-	-
Hampton Roads, VA	-	13.4	22.5	28.1	32.0	35.1	37.5	39.5	41.3	42.8	44.7	46.9	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	21.6	23.6	-	-	27.8	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	7.8	13.2	16.5	18.8	20.5	22.0	23.2	24.2	25.0	26.2	27.4	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	38.4	40.2	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	6.2	10.4	12.9	14.8	16.1	17.3	18.2	19.0	19.7	20.6	21.6	-	23.1	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	7.5	12.7	15.8	18.1	19.8	21.1	22.3	23.3	24.1	25.2	26.4	-	28.3	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	17.9	20.4	22.3	-	25.2	26.3	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	9.9	16.6	-	-	-	-	-	30.4	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	9.8	16.4	20.5	23.4	25.6	27.4	28.8	30.1	31.2	32.6	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-52 Freight Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	21.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	17.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
	-	1.7	10.3	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	1.3	7.4	11.3	14.0	-	-	-	-	-	22.9	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-53. General Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	1.6	9.4	-	-	-	-	24.3	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	1.9	11.3	-	21.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	1.9	11.3	-	21.2	24.4	-	29.1	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	17.0	-	-	27.0	29.1	31.0	32.6	-	-	-	-	-	-	-	-
New Haven, CT	-	1.9	11.3	17.0	21.2	24.4	-	-	31.0	32.6	-	-	-	-	-	-	-	-
Bridgeport, CT	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	1.5	8.7	13.2	16.4	18.8	20.8	22.5	23.9	25.2	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	1.7	10.3	15.6	19.4	22.3	24.7	26.7	28.4	29.9	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	1.7	10.2	15.4	19.2	22.1	24.4	26.3	28.0	29.5	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	1.7	10.2	15.4	19.2	22.1	24.4	26.3	28.0	29.5	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	1.2	6.9	10.4	12.9	14.9	-	17.8	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	1.0	6.0	9.0	11.2	12.9	14.3	15.4	16.4	17.3	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	1.6	-	-	-	-	-	-	25.2	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	0.8	4.7	7.1	8.8	10.2	11.2	12.1	12.9	13.6	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	1.0	5.7	8.7	10.8	12.4	13.7	14.8	15.8	16.6	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	1.1	6.5	9.8	12.2	-	15.5	16.8	17.9	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	1.3	7.5	11.4	-	-	-	19.4	20.6	21.7	-	-	-	-	-	-	-	-
Jacksonville, FL	-	1.3	7.4	11.3	14.0	16.1	17.8	19.2	20.4	21.5	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-54. Passenger Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	13.4	23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	13.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	16.1	28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	16.1	28.6	38.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	16.1	28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	12.4	22.1	29.8	36.2	41.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	14.7	26.2	35.4	-	49.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	14.5	25.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	14.5	25.9	34.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	6.7	11.9	16.1	19.5	22.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	8.2	-	-	-	27.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	10.6	18.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-55. Refrigerated Cargo Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	24.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	11.4	19.2	-	-	30.0	-	-	-	-	38.2	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	13.6	22.8	28.5	32.5	35.5	38.0	-	-	-	45.3	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	13.4	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	13.4	22.5	-	-	35.1	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	6.2	10.4	12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	-	-	19.8	-	-	-	-	25.2	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	8.5	14.4	17.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	9.8	16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-56. Ro-Ro Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	20.7	25.9	29.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	24.9	31.0	35.4	-	-	-	-	47.3	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	31.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	31.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
	-	11.4	19.2	24.0	27.4	30.0	32.0	33.8	35.3	36.5	38.2	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
	-	13.6	22.8	28.5	32.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	13.4	22.5	28.1	32.0	35.1	37.5	39.5	41.3	42.8	44.7	-	-	-	-	-	-	-
Hampton Roads, VA	-	13.4	22.5	28.1	32.0	35.1	37.5	39.5	41.3	-	44.7	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	15.2	18.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	7.8	13.2	16.5	18.8	-	22.0	-	24.2	-	26.2	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	25.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	6.2	10.4	12.9	14.8	16.1	17.3	18.2	19.0	19.7	20.6	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	7.5	12.7	15.8	18.1	19.8	21.1	22.3	23.3	24.1	25.2	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	8.5	14.4	17.9	20.4	22.3	-	-	26.3	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	16.4	20.5	23.4	25.6	27.4	28.8	30.1	-	32.6	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-57 Tank Barges: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	0.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	0.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay																		
-	-	-	-	0.4	-	2.0	2.5	-	-	3.8	4.3	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
-	-	-	-	0.2	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
-	-	-	-	0.2	0.6	-	1.2	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA																		
-	-	-	-	0.2	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	0.3	-	1.4	1.8	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-58. Tankers: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	1.8	2.3	2.8	3.1	3.5	3.9	4.5	-	-	-	-	-	7.3
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
	-	-	-	-	-	-	-	-	-	-	7.1	8.0	8.8	-	-	-	-	-
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	2.1	2.8	3.3	3.8	4.2	4.7	5.4	5.9	-	-	-	-	-
New London, CT	-	-	-	0.4	-	-	2.8	-	-	4.2	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	0.4	-	2.1	2.8	3.3	3.8	4.2	4.7	-	-	-	6.8	-	-	-
Bridgeport, CT	-	-	-	-	-	-	2.8	3.3	-	4.2	-	5.4	-	-	-	-	8.0	-
Long Island, NY	-	-	-	0.4	-	-	-	3.3	-	4.2	4.7	5.4	5.9	-	6.8	7.3	8.0	8.8
Mid-Atlantic Ports of New York/New Jersey																		
	-	-	-	0.3	1.1	1.6	2.1	2.6	2.9	3.2	3.7	4.1	4.6	4.9	5.2	5.6	6.2	6.8
Mid-Atlantic Delaware Bay																		
	-	-	-	0.4	1.3	2.0	2.5	3.0	3.5	3.8	4.3	4.9	5.4	5.8	6.2	6.7	7.4	8.0
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	0.4	1.2	1.9	2.5	3.0	3.4	3.8	4.3	4.9	5.3	-	6.1	6.6	-	7.9
Hampton Roads, VA	-	-	-	0.4	1.2	1.9	2.5	3.0	3.4	3.8	4.3	4.9	5.3	5.7	6.1	6.6	7.3	7.9
Mid-Atlantic Morehead City and Beaufort, NC																		
	-	-	-	0.2	-	1.3	1.7	2.0	-	-	-	3.3	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC																		
	-	-	-	0.2	0.7	1.1	1.5	1.8	2.0	2.2	2.5	2.8	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC																		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC																		
	-	-	-	0.2	0.6	0.9	1.2	1.4	1.6	1.7	2.0	2.2	-	2.6	-	-	-	-
Mid-Atlantic Savannah, GA																		
	-	-	-	0.2	0.7	1.1	1.4	1.7	1.9	2.1	2.4	2.7	3.0	-	-	-	-	-
Southeastern US																		
Brunswick, GA	-	-	-	-	-	1.2	1.6	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	0.3	0.9	1.4	1.8	2.2	2.5	2.8	3.1	3.5	-	-	-	4.8	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-59. Towing Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Table F-60. Other Vessels: Estimated Minutes of Delay per Vessel Arrival for Speed Restrictions of 14 Knots by Port Area and Vessel DWT

ANPR Port Region and Port Area	DWT (000s)																	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+
Northeastern US - Gulf of Maine																		
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point																		
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay																		
Mid-Atlantic Block Island Sound																		
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey																		
Mid-Atlantic Delaware Bay																		
Mid-Atlantic Chesapeake Bay																		
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC																		
Mid-Atlantic Wilmington, NC																		
Mid-Atlantic Georgetown, SC																		
Mid-Atlantic Charleston, SC																		
Mid-Atlantic Savannah, GA																		
Southeastern US																		
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc.

Appendix G

ESTIMATED ECONOMIC
IMPACT OF ANPR ON U.S.
FLAG VESSELS

Table G-1. Bulk Carriers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5
New Bedford, MA	-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	1.5
Providence, RI	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	0.1	0.5	-	-	-	-	-	-	0.0	-	-	-	0.6
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.0
Hampton Roads, VA	-	-	-	-	-	-	0.1	0.5	-	-	-	-	-	-	-	-	-	-	0.6
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	0.0	-	-	0.1	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	0.1	-	-	0.5	-	-	-	-	-	-	-	-	0.5
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Southeastern US	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.2
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.2
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	0.4	2.1	-	0.6	-	-	-	-	0.0	-	-	-	0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-2. Bulk Carriers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	0.8
New Bedford, MA	-	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	0.8
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	0.0	-	-	-	-	-	0.2	-	-	-	-	-	-	0.2
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	0.0	0.6	-	-	-	-	-	-	0.0	-	-	-	0.6
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.0
Hampton Roads, VA	-	-	-	-	-	-	0.0	0.6	-	-	-	-	-	-	-	-	-	-	0.6
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	0.0	0.0	-	-	0.1	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Southeastern US	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	0.1
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0
Total	-	-	-	-	-	0.0	0.1	1.4	-	0.3	-	0.3	-	-	0.0	-	-	-	0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-3. Combination Carriers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-4. Combination Carriers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-5. Containerships: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	10.1	1.4	3.3	8.3	9.5	-	-	28.3	14.9	-	-	-	-	-	-	75.8
Mid-Atlantic Delaware Bay	-	-	-	-	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9
Mid-Atlantic Chesapeake Bay	0.6	-	-	1.4	0.0	-	18.1	8.6	32.1	12.9	19.0	14.8	-	-	-	-	-	-	107.4
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	0.6	-	-	1.4	0.0	-	18.1	8.6	32.1	12.9	19.0	14.8	-	-	-	-	-	-	107.4
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	0.4	-	-	0.1	-	-	-	1.1	-	-	-	-	-	-	-	1.7
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	0.0	-	-	1.6	-	-	-	-	-	-	-	1.7
Mid-Atlantic Charleston, SC	-	-	-	0.7	0.8	-	12.8	6.6	40.0	7.8	61.3	10.7	-	-	-	-	-	-	140.6
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	4.3	-	-	3.9	11.5	-	-	11.4	-	-	-	-	31.1
Southeastern US	-	-	-	7.8	28.2	1.8	-	-	-	-	-	-	-	-	-	-	-	-	37.8
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	7.8	28.2	1.8	-	-	-	-	-	-	-	-	-	-	-	-	37.8
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.6	-	-	20.4	40.3	5.1	43.7	24.7	72.0	24.6	122.7	40.4	-	11.4	-	-	-	-	406.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-6. Containerships: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	0.2	-	-	0.3	0.1	0.5	-	-	-	-	-	-	1.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.1
Portsmouth, NH	-	-	-	-	-	-	0.2	-	-	0.3	0.1	0.5	-	-	-	-	-	-	1.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	5.2	-	9.7	11.3	6.5	-	5.4	30.1	23.5	-	-	-	-	-	-	91.7
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	0.7	-	-	0.7	-	1.9	19.2	8.6	29.5	8.0	15.5	24.5	-	-	-	-	-	-	108.5
Baltimore, MD	-	-	-	-	-	0.9	0.1	-	-	-	-	-	-	-	-	-	-	-	1.0
Hampton Roads, VA	0.7	-	-	0.7	-	1.0	19.1	8.6	29.5	8.0	15.5	24.5	-	-	-	-	-	-	107.5
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	0.6	-	-	0.2	-	-	-	0.1	-	-	-	-	-	-	-	0.8
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	0.0	-	1.0	14.8	5.9	39.3	13.1	51.4	19.9	-	-	-	-	-	-	145.4
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	2.0	-	-	1.8	6.8	-	-	9.0	-	-	-	-	19.6
Southeastern US	-	-	-	4.5	17.7	5.7	-	-	-	-	0.1	-	-	-	-	-	-	-	28.0
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	4.5	17.7	5.7	-	-	-	-	0.1	-	-	-	-	-	-	-	28.0
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.7	-	-	11.0	17.7	18.3	47.6	21.0	68.8	28.5	104.0	68.4	-	9.0	-	-	-	-	395.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-7. Freight Barges: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	0.0	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Northeastern US - Off Race Point	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Boston, MA	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	-	0.0	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6
New Bedford, MA	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Delaware Bay	0.0	0.7	0.3	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.0	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Southeastern US	0.0	0.8	4.8	4.6	0.5	-	0.0	-	-	-	-	-	-	-	-	-	-	-	10.9
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Jacksonville, FL	0.0	0.8	4.8	4.6	0.5	-	0.0	-	-	-	-	-	-	-	-	-	-	-	10.8
Port Canaveral, FL	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
																			0
Total	0.0	1.5	5.2	7.5	1.1	-	0.0	-	-	-	-	-	-	-	-	-	-	-	15.4

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-8. Freight Barges: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	0.0	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
Bridgeport, CT	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Long Island, NY	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Delaware Bay	-	0.2	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Mid-Atlantic Chesapeake Bay	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	0.0	0.8	6.5	6.8	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	14.2
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Jacksonville, FL	0.0	0.8	6.5	6.8	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	14.2
Port Canaveral, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	0.0	1.2	6.5	8.2	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	16.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-9. General Cargo Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Delaware Bay	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Mid-Atlantic Chesapeake Bay	0.0	0.0	-	-	0.5	0.7	-	1.1	-	-	-	-	-	-	-	-	-	-	2.3
Baltimore, MD	-	0.0	-	-	0.5	0.0	-	1.1	-	-	-	-	-	-	-	-	-	-	1.6
Hampton Roads, VA	0.0	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	0.8
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.0	-	-	0.2	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Mid-Atlantic Savannah, GA	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	0.4
Southeastern US	0.0	0.0	-	-	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1
Brunswick, GA	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	0.0	-	-	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1
Port Canaveral, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	0.0	0.0	0.3	0.2	4.6	1.4	-	1.1	0.8	-	-	-	-	-	-	-	-	-	8.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-10. General Cargo Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	0.0	0.3	0.0	0.0	2.1	0.9	-	-	-	-	-	-	-	-	-	-	-	3.3
Baltimore, MD	-	0.0	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Hampton Roads, VA	-	-	0.0	0.0	0.0	2.1	0.9	-	-	-	-	-	-	-	-	-	-	-	3.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Wilmington, NC	-	-	-	-	0.3	0.0	0.5	-	-	-	-	-	-	-	-	-	-	-	0.9
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	0.0	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Mid-Atlantic Savannah, GA	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Southeastern US	0.0	-	0.0	-	0.0	1.7	0.1	-	-	-	-	-	-	-	-	-	-	-	1.8
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	0.0	-	0.0	1.7	0.1	-	-	-	-	-	-	-	-	-	-	-	1.8
Port Canaveral, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	0.0	0.0	0.3	0.0	0.4	4.1	1.5	-	-	-	-	-	-	-	-	-	-	-	0
																			6.4

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-11. Passenger Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Portland, ME	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	21.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.5
New Bedford, MA	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7
Providence, RI	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
New London, CT	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.1
Mid-Atlantic Ports of New York/New Jersey	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4
Mid-Atlantic Savannah, GA	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Southeastern US	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3
Port Canaveral, FL	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Total	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-12. Passenger Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	36.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2
New Haven, CT	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3
Bridgeport, CT	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
Long Island, NY	20.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.9
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1
Mid-Atlantic Savannah, GA	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8
Southeastern US	8.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.9
Brunswick, GA	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
Fernandina, FL	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Jacksonville, FL	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6
Port Canaveral, FL	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
																			0
Total	49.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-13. Refrigerated Cargo Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-14. Refrigerated Cargo Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-15. Ro-Ro Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	0.1	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Boston, MA	-	-	0.1	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	0.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	0.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.0	0.0	-	2.5	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3
Mid-Atlantic Delaware Bay	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Chesapeake Bay	0.1	0.0	0.1	13.5	5.5	5.1	1.1	-	-	-	-	-	-	-	-	-	-	-	25.4
Baltimore, MD	-	0.0	0.0	13.5	4.5	5.1	1.1	-	-	-	-	-	-	-	-	-	-	-	24.2
Hampton Roads, VA	0.1	-	0.1	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Mid-Atlantic Wilmington, NC	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.0	0.3	3.8	2.2	3.0	0.5	-	-	-	-	-	-	-	-	-	-	-	9.8
Mid-Atlantic Savannah, GA	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
Southeastern US	-	-	0.8	29.9	4.2	5.2	-	-	-	-	-	-	-	-	-	-	-	-	40.2
Brunswick, GA	-	-	0.4	7.0	2.8	5.2	-	-	-	-	-	-	-	-	-	-	-	-	15.4
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	0.4	23.0	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	24.8
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.1	0.1	1.6	51.3	13.6	13.3	1.7	-	-	-	-	-	-	-	-	-	-	-	81.6

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-16. Ro-Ro Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	0.1	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	0.1	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Boston, MA	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	2.5	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	0.0	12.0	7.8	4.0	-	-	-	-	-	-	-	-	-	-	-	-	23.7
Baltimore, MD	-	-	0.0	10.6	6.0	2.9	-	-	-	-	-	-	-	-	-	-	-	-	19.6
Hampton Roads, VA	-	-	-	1.4	1.7	1.0	-	-	-	-	-	-	-	-	-	-	-	-	4.2
Mid-Atlantic Morehead City and Beaufort, NC	-	-	0.4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
Mid-Atlantic Wilmington, NC	-	0.2	-	-	0.5	-	0.8	-	-	-	-	-	-	-	-	-	-	-	1.5
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.1	0.2	-	4.1	3.7	1.9	0.6	-	-	-	-	-	-	-	-	-	-	-	10.6
Mid-Atlantic Savannah, GA	-	0.0	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Southeastern US	0.0	0.0	-	20.4	5.9	1.5	0.8	-	-	-	-	-	-	-	-	-	-	-	28.8
Brunswick, GA	-	-	-	5.1	4.5	1.3	-	-	-	-	-	-	-	-	-	-	-	-	10.8
Fernandina, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Jacksonville, FL	-	0.0	-	15.4	1.5	0.3	0.8	-	-	-	-	-	-	-	-	-	-	-	18.0
Port Canaveral, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	0.1	0.5	1.7	39.8	19.4	7.4	2.2	-	-	-	-	-	-	-	-	-	-	-	71.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-17. Tank Barges: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.1	0.3	0.5	0.2	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	1.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	0.2	0.3	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Portland, ME	0.0	0.0	0.0	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Portsmouth, NH	-	0.0	0.1	0.0	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.2
Northeastern US - Off Race Point	0.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Boston, MA	0.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	4.8	12.9	5.9	5.9	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	33.1
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	0.5	1.2	0.3	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3
New Haven, CT	0.4	3.4	1.9	2.6	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
Bridgeport, CT	0.8	2.6	0.8	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8
Long Island, NY	3.2	5.7	2.9	0.6	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	15.5
Mid-Atlantic Ports of New York/New Jersey	-	-	0.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Mid-Atlantic Delaware Bay	-	0.4	0.0	-	0.0	0.3	0.3	-	-	1.0	0.4	-	-	-	-	-	-	-	2.4
Mid-Atlantic Chesapeake Bay	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Baltimore, MD	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Wilmington, NC	-	0.7	0.4	0.4	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.1	-	0.1	2.5	-	0.2	-	-	-	-	-	-	-	-	-	-	-	2.9
Mid-Atlantic Savannah, GA	-	0.4	0.1	0.3	-	-	0.0	-	-	0.2	-	-	-	-	-	-	-	-	1.1
Southeastern US	-	0.5	0.0	0.3	-	0.7	0.3	-	-	0.1	-	-	-	-	-	-	-	-	1.9
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	0.5	0.0	0.3	-	0.7	0.3	-	-	0.1	-	-	-	-	-	-	-	-	1.8
Port Canaveral, FL	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	5.2	15.5	7.0	7.1	6.2	1.3	0.8	-	-	1.4	0.4	-	-	-	-	-	-	-	44.8

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-18. Tank Barges: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	0.2	0.2	0.1	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.6
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	0.1	0.1	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Portland, ME	0.0	0.1	0.1	0.1	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.3
Portsmouth, NH	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	17.7	30.2	7.9	12.4	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	78.3
New Bedford, MA	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Providence, RI	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	1.8	2.4	0.3	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0
New Haven, CT	3.3	6.1	3.0	5.2	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	18.2
Bridgeport, CT	2.6	5.1	2.4	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9
Long Island, NY	10.1	16.7	2.3	3.3	8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	41.2
Mid-Atlantic Ports of New York/New Jersey	0.1	2.4	0.2	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7
Mid-Atlantic Delaware Bay	0.2	0.4	0.5	1.3	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	2.4
Mid-Atlantic Chesapeake Bay	0.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Baltimore, MD	0.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Hampton Roads, VA	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	0.5	-	1.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	0.5	0.4	1.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	2.2
Mid-Atlantic Savannah, GA	-	0.4	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Southeastern US	-	-	-	0.8	0.0	0.2	0.5	-	-	-	-	-	-	-	-	-	-	-	1.5
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	0.8	0.0	0.2	0.4	-	-	-	-	-	-	-	-	-	-	-	1.4
Port Canaveral, FL	-	-	-	0.0	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	18.1	34.3	9.3	16.0	11.5	0.2	0.6	-	-	0.0	-	-	-	-	-	-	-	-	89.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-19. Tankers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	-	-	-	-	-	0.1	0.3	-	0.0	-	-	-	-	-	-	-	-	0.4
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	-	-	-	-	-	0.0	0.0	-	0.0	-	-	-	-	-	-	-	-	0.1
Portland, ME	0.0	-	-	-	-	-	0.0	0.2	-	0.0	-	-	-	-	-	-	-	-	0.2
Portsmouth, NH	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	0.2	-	-	-	-	-	0.1	0.3	0.1	-	-	-	-	-	-	-	-	-	0.7
Boston, MA	0.2	-	-	-	-	-	0.1	0.3	0.1	-	-	-	-	-	-	-	-	-	0.7
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	4.4	-	-	1.5	-	-	0.7	0.4	0.7	0.1	-	-	-	-	-	-	-	-	7.8
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	0.4	-	-	-	-	-	0.0	0.0	0.7	0.1	-	-	-	-	-	-	-	-	1.2
New London, CT	-	-	-	0.0	-	-	0.3	0.0	-	-	-	-	-	-	-	-	-	-	0.4
New Haven, CT	1.6	-	-	0.3	-	-	0.0	0.0	-	0.1	-	-	-	-	-	-	-	-	1.9
Bridgeport, CT	0.9	-	-	-	-	-	0.3	0.3	-	-	-	-	-	-	-	-	-	-	1.6
Long Island, NY	1.6	-	-	1.2	-	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	2.8
Mid-Atlantic Ports of New York/New Jersey	4.7	-	-	0.1	-	-	2.9	5.2	3.8	0.7	-	-	-	-	-	-	-	-	17.5
Mid-Atlantic Delaware Bay	0.5	-	-	1.3	-	-	1.9	7.0	-	2.5	-	-	-	-	-	-	-	-	13.1
Mid-Atlantic Chesapeake Bay	0.2	-	-	-	-	-	1.2	1.3	0.0	2.1	-	-	-	-	-	-	-	-	4.7
Baltimore, MD	0.2	-	-	-	-	-	0.6	0.3	-	1.7	-	-	-	-	-	-	-	-	2.8
Hampton Roads, VA	-	-	-	-	-	-	0.6	0.9	0.0	0.3	-	-	-	-	-	-	-	-	1.9
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.9	-	-	0.0	-	-	0.6	-	1.4	0.7	-	-	-	-	-	-	-	-	3.6
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.0	-	-	0.0	-	-	0.0	0.9	1.8	0.3	-	-	-	-	-	-	-	-	3.1
Mid-Atlantic Savannah, GA	0.0	-	-	0.3	-	-	0.4	2.4	0.8	0.2	-	-	-	-	-	-	-	-	4.1
Southeastern US	0.2	-	-	-	-	-	-	1.8	-	1.1	0.3	-	-	-	-	-	-	-	3.4
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.2	-	-	-	-	-	-	1.7	-	1.1	0.3	-	-	-	-	-	-	-	3.3
Port Canaveral, FL	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Total	11.2	-	-	3.3	-	-	7.8	19.4	8.7	7.7	0.3	-	-	-	-	-	-	-	58.4

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-20. Tankers: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.1	-	-	0.0	-	-	0.0	0.5	0.0	0.1	0.1	-	-	-	-	-	0.0	-	0.9
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	0.0	-	0.1	-	-	-	-	-	-	-	-	0.1
Portland, ME	0.1	-	-	-	-	-	0.0	0.4	0.0	0.1	0.1	-	-	-	-	-	0.0	-	0.8
Portsmouth, NH	-	-	-	0.0	-	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	0.1
Northeastern US - Off Race Point	0.0	-	-	-	-	-	0.1	0.5	-	-	-	-	-	-	-	-	-	-	0.6
Boston, MA	0.0	-	-	-	-	-	0.1	0.5	-	-	-	-	-	-	-	-	-	-	0.6
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	13.5	-	-	2.6	-	-	0.4	0.7	-	1.5	0.0	-	-	-	-	-	-	-	18.7
New Bedford, MA	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Providence, RI	0.5	-	-	-	-	-	0.3	0.3	-	0.8	-	-	-	-	-	-	-	-	1.9
New London, CT	-	-	-	0.3	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.3
New Haven, CT	3.1	-	-	-	-	-	0.0	0.0	-	0.8	0.0	-	-	-	-	-	-	-	3.9
Bridgeport, CT	2.5	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	2.5
Long Island, NY	7.4	-	-	2.3	-	-	0.0	0.3	-	-	-	-	-	-	-	-	-	-	10.1
Mid-Atlantic Ports of New York/New Jersey	6.5	-	-	1.4	-	-	3.5	5.0	3.9	1.8	0.0	-	-	-	-	-	-	-	22.2
Mid-Atlantic Delaware Bay	0.5	-	-	0.6	-	-	1.3	3.0	0.7	1.4	0.0	-	-	-	-	-	-	-	7.5
Mid-Atlantic Chesapeake Bay	0.2	-	-	0.0	-	-	2.5	-	0.0	1.4	0.0	-	-	-	-	-	-	-	4.1
Baltimore, MD	-	-	-	0.0	-	-	0.0	-	-	1.1	-	-	-	-	-	-	-	-	1.1
Hampton Roads, VA	0.2	-	-	-	-	-	2.4	-	0.0	0.4	0.0	-	-	-	-	-	-	-	3.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Wilmington, NC	0.9	-	-	-	-	-	0.0	-	1.9	0.0	-	-	-	-	-	-	-	-	2.9
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.1	-	-	-	-	-	0.8	2.1	1.1	0.2	-	-	-	-	-	-	-	-	4.1
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	0.7	3.1	0.5	0.2	-	-	-	-	-	-	-	-	4.5
Southeastern US	0.2	-	-	-	-	-	0.6	1.8	0.0	3.8	-	-	-	-	-	-	-	-	6.5
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.2	-	-	-	-	-	0.6	1.8	0.0	3.8	-	-	-	-	-	-	-	-	6.4
Port Canaveral, FL	-	-	-	-	-	-	0.0	0.0	-	0.0	-	-	-	-	-	-	-	-	0.1
Total	22.1	-	-	4.5	-	-	9.8	16.5	8.2	10.6	0.2	-	-	-	-	-	0.0	-	71.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-21. Towing Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Mid-Atlantic Delaware Bay	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
Mid-Atlantic Chesapeake Bay	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
Baltimore, MD	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
Hampton Roads, VA	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Mid-Atlantic Savannah, GA	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Southeastern US	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Jacksonville, FL	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
Port Canaveral, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Total	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.1

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-22. Towing Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Portsmouth, NH	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
New London, CT	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Haven, CT	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Mid-Atlantic Ports of New York/New Jersey	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4
Mid-Atlantic Delaware Bay	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Mid-Atlantic Chesapeake Bay	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Baltimore, MD	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Hampton Roads, VA	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Mid-Atlantic Savannah, GA	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Southeastern US	14.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.5
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8
Jacksonville, FL	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6
Port Canaveral, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Total	20.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-23. Other Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table G-24. Other Vessels: Estimated Economic Impact of ANPR on US Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Appendix H

ESTIMATED ECONOMIC
IMPACT OF ANPR ON
FOREIGN FLAG VESSELS

Table H-1. Bulk Carriers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	-	-	-	-	-	0.9
Eastport, ME	-	-	0.0	0.0	0.0	-	0.0	-	0.0	-	-	-	-	-	-	-	-	-	0.0
Searsport, ME	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	-	-	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	0.5
Portsmouth, NH	-	-	-	-	-	0.0	0.0	0.1	0.0	0.1	0.0	0.1	-	-	-	-	-	-	0.4
Northeastern US - Off Race Point	-	-	0.1	0.2	0.0	0.0	-	0.3	0.7	0.1	0.4	0.2	0.5	-	-	-	-	-	2.5
Boston, MA	-	-	0.1	0.2	0.0	0.0	-	0.1	0.2	0.1	0.3	0.2	0.1	-	-	-	-	-	1.3
Salem, MA	-	-	-	-	-	-	-	0.1	0.5	-	0.0	0.0	0.5	-	-	-	-	-	1.2
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	0.0	0.2	0.3	0.6	1.1	1.2	1.4	1.1	1.5	0.3	0.9	-	-	-	-	-	8.6
New Bedford, MA	-	-	-	-	0.0	-	-	0.1	0.5	-	-	0.0	0.6	-	-	-	-	-	1.2
Providence, RI	-	-	-	0.2	0.0	0.2	1.1	0.6	0.2	0.2	0.0	0.0	0.0	-	-	-	-	-	2.6
New London, CT	-	-	0.0	0.0	-	0.0	-	-	-	0.2	0.2	-	-	-	-	-	-	-	0.5
New Haven, CT	-	-	0.0	0.0	0.3	0.3	0.0	0.4	0.7	0.7	1.0	0.3	-	-	-	-	-	-	3.7
Bridgeport, CT	-	-	0.0	-	-	-	-	-	-	0.0	0.2	-	0.3	-	-	-	-	-	0.6
Long Island, NY	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	-	0.1	0.4	0.1	0.6	1.5	2.0	3.2	2.8	1.7	1.3	1.4	0.2	-	-	-	-	15.5
Mid-Atlantic Delaware Bay	-	-	0.7	0.3	0.8	1.7	2.5	2.6	3.2	3.9	1.7	4.2	1.1	-	-	-	-	-	22.6
Mid-Atlantic Chesapeake Bay	-	-	0.4	0.5	0.9	0.8	2.3	2.4	2.4	1.5	1.7	7.3	14.4	0.6	0.3	0.6	2.9	2.6	41.4
Baltimore, MD	-	-	0.3	0.3	0.3	0.4	0.8	0.6	0.8	0.8	0.5	4.0	9.4	0.0	-	0.3	2.1	0.8	21.6
Hampton Roads, VA	-	-	0.0	0.2	0.6	0.4	1.5	1.8	1.6	0.7	1.2	3.2	5.0	0.6	0.3	0.3	0.8	1.7	19.8
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	0.1	0.1	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.2
Mid-Atlantic Wilmington, NC	-	-	0.0	0.1	0.2	0.6	0.6	0.3	0.5	0.6	0.1	0.0	0.0	-	-	-	-	-	3.0
Mid-Atlantic Georgetown, SC	-	-	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.6	-	-	-	-	-	-	-	1.4
Mid-Atlantic Charleston, SC	-	-	0.1	0.2	0.1	0.1	0.5	0.9	1.8	0.7	0.6	0.3	1.6	0.1	-	-	-	-	6.8
Mid-Atlantic Savannah, GA	-	-	0.1	0.2	0.4	0.8	0.8	0.7	1.0	1.3	0.4	-	0.2	-	-	-	-	-	5.9
Southeastern US	-	-	0.2	0.2	0.2	0.7	0.9	0.8	0.8	1.0	0.8	1.5	1.4	-	-	-	-	-	8.3
Brunswick, GA	-	-	0.0	0.0	0.2	0.3	0.0	0.2	0.1	0.3	-	0.5	0.0	-	-	-	-	-	1.8
Fernandina, FL	-	-	0.0	0.0	-	-	-	-	0.0	-	0.2	-	-	-	-	-	-	-	0.2
Jacksonville, FL	-	-	0.1	0.1	0.0	0.3	0.8	0.5	0.6	0.6	1.0	1.4	-	-	-	-	-	-	6.0
Port Canaveral, FL	-	-	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-	-	0.0	-	-	-	-	-	0.2
Total	-	-	1.8	2.3	3.1	6.1	10.4	11.3	15.2	13.1	9.6	15.2	21.5	1.0	0.3	0.6	2.9	2.6	117.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-2. Bulk Carriers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	0.0	0.0	0.2	0.2	0.2	0.3	0.4	0.3	0.1	0.1	0.1	-	-	-	-	-	2.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	0.0	0.0	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.1	-	-	-	-	-	1.6
Portsmouth, NH	-	-	0.0	-	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	0.4
Northeastern US - Off Race Point	-	-	0.0	0.1	0.0	0.1	0.0	0.0	0.4	0.1	-	0.1	0.2	-	-	-	-	-	1.0
Boston, MA	-	-	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.1	-	0.1	0.1	-	-	-	-	-	0.7
Salem, MA	-	-	-	-	-	-	-	-	0.2	0.1	-	-	0.1	-	-	-	-	-	0.4
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	0.0	0.2	0.3	0.7	1.1	1.4	0.9	2.9	1.3	2.4	3.2	-	-	-	-	-	14.5
New Bedford, MA	-	-	-	-	0.1	-	0.0	0.2	0.0	0.4	0.3	1.1	0.9	-	-	-	-	-	3.0
Providence, RI	-	-	-	0.1	0.1	0.1	0.8	0.8	0.7	0.6	0.0	0.0	0.0	-	-	-	-	-	3.1
New London, CT	-	-	-	0.0	-	0.0	-	0.2	0.2	0.5	-	-	-	-	-	-	-	-	1.0
New Haven, CT	-	-	0.0	0.0	0.1	0.6	0.4	0.1	0.0	0.5	1.0	1.0	-	-	-	-	-	-	3.8
Bridgeport, CT	-	-	0.0	-	-	-	-	-	-	0.9	-	0.3	2.3	-	-	-	-	-	3.5
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	0.2	0.3	0.1	0.7	1.4	2.6	4.0	3.9	3.1	1.1	1.6	0.2	-	-	-	-	19.4
Mid-Atlantic Delaware Bay	-	-	0.2	0.3	0.5	1.9	1.4	3.8	2.8	3.2	1.7	0.5	0.8	-	-	-	-	-	17.1
Mid-Atlantic Chesapeake Bay	-	-	0.3	0.4	0.8	1.1	1.5	2.9	2.5	3.0	2.4	8.8	16.8	2.2	-	0.6	1.1	0.8	45.3
Baltimore, MD	-	-	0.2	0.2	0.3	0.7	0.6	1.9	1.0	2.0	1.9	5.1	8.3	1.1	-	-	0.0	0.4	23.7
Hampton Roads, VA	-	-	0.2	0.2	0.5	0.4	0.9	1.0	1.5	1.0	0.5	3.7	8.5	1.1	-	0.6	1.1	0.4	21.6
Mid-Atlantic Morehead City and Beaufort, NC	-	-	0.0	-	0.1	0.1	0.0	-	-	-	0.2	0.0	0.0	-	-	-	-	-	0.4
Mid-Atlantic Wilmington, NC	-	-	0.0	0.1	0.0	0.3	0.3	0.5	0.7	0.2	0.6	-	0.2	-	-	-	-	-	2.8
Mid-Atlantic Georgetown, SC	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Charleston, SC	-	-	0.0	0.2	0.1	0.2	0.5	0.9	1.5	0.3	0.2	0.5	1.2	-	-	-	-	-	5.8
Mid-Atlantic Savannah, GA	-	-	0.2	0.2	0.5	0.9	1.3	0.7	1.4	0.9	0.8	-	-	-	-	-	-	-	6.9
Southeastern US	-	-	0.1	0.2	0.1	0.6	0.3	0.4	2.3	2.2	0.9	1.0	1.2	-	-	-	-	-	9.2
Brunswick, GA	-	-	0.0	0.1	0.0	0.2	0.0	0.1	0.6	0.3	0.0	0.2	-	-	-	-	-	-	1.6
Fernandina, FL	-	-	0.0	-	-	-	0.0	0.1	0.0	-	0.4	-	-	-	-	-	-	-	0.5
Jacksonville, FL	-	-	0.1	0.1	0.0	0.3	0.2	0.2	1.6	1.8	0.4	0.8	1.2	-	-	-	-	-	6.9
Port Canaveral, FL	-	-	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	0.3
Total	-	-	1.2	2.0	2.8	6.7	8.0	13.5	17.0	17.1	11.3	14.5	25.3	2.5	-	0.6	1.1	0.8	124.4

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-3. Combination Carriers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.0	0.1	-	-	0.2
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.1	-	-	0.2
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	0.1
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	0.1
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	0.3	0.0	0.3	-	-	-	-	-	0.6
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	0.3	-	0.3	-	-	-	-	-	0.6
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	0.0	-	0.3	0.4	0.5	2.0	0.5	0.3	0.0	-	-	4.0
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.3	4.7	-	-	-	5.0
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	0.2	-	-	0.9	0.9	0.3	0.0	-	-	2.3
Baltimore, MD	-	-	-	-	-	-	-	-	-	0.2	-	-	0.3	0.3	-	-	-	-	0.8
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.6	0.3	0.0	-	-	1.5
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-	-	-	-	0.4
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	0.2	-	0.2	0.0	-	-	-	-	-	-	-	0.4
Southeastern US	-	-	-	-	-	-	-	-	0.1	0.1	0.0	0.0	-	-	-	-	-	-	0.3
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	0.3
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	-	-	-	0.0
Total	-	-	-	-	-	-	-	0.2	0.1	1.1	0.7	0.5	3.4	1.7	5.3	0.1	-	-	13.2

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-4. Combination Carriers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	0.0	0.0	-	0.0	-	-	-	0.0	0.3	-	-	0.4
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0
Portland, ME	-	-	-	-	-	-	-	0.0	0.0	-	-	-	-	-	0.0	0.3	-	-	0.3
Portsmouth, NH	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Boston, MA	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	0.0	-	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.0	-	-	-	-	0.0
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	0.0	-	0.5	0.4	-	1.7	0.6	0.6	-	-	-	3.8
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	1.9	0.0	-	-	2.0
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	0.1	-	-	0.0	-	2.3	0.4	0.0	0.3	-	-	3.2
Baltimore, MD	-	-	-	-	-	-	-	0.1	-	-	0.0	-	0.6	0.0	-	-	-	-	0.7
Hampton Roads, VA	-	-	-	-	-	-	-	0.0	-	-	0.0	-	1.8	0.4	0.0	0.3	-	-	2.5
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-	-	-	-	0.4
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	0.1	-	0.5	-	-	-	-	-	-	-	-	0.7
Southeastern US	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.0
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.0
Port Canaveral, FL	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0
Total	-	-	-	-	-	-	-	0.3	0.0	1.3	0.5	-	4.2	0.9	2.6	0.7	-	-	10.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-5. Containerships: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	0.0	0.1	0.1	0.2	-	0.3	0.1	0.3	0.8	-	1.6	-	-	-	-	-	-	3.4
Eastport, ME	-	0.0	-	-	-	-	-	0.1	0.3	-	-	-	-	-	-	-	-	-	0.4
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	0.1	0.1	0.1	-	0.3	-	0.1	0.8	-	1.6	-	-	-	-	-	-	3.0
Portsmouth, NH	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	1.4	-	0.7	1.0	1.1	0.2	14.5	13.3	8.6	18.0	0.9	-	-	-	-	-	-	59.8
Boston, MA	-	1.4	-	0.7	1.0	1.1	0.2	14.5	13.3	8.6	18.0	0.9	-	-	-	-	-	-	59.8
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	0.7	-	1.0	-	-	-	0.1	-	-	-	-	-	-	-	-	1.7
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	0.0	-	1.0	-	-	-	0.1	-	-	-	-	-	-	-	-	1.1
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.3	1.8	31.9	22.2	30.6	40.8	83.7	60.0	136.3	197.3	280.6	277.3	-	-	-	-	-	-	1,163.0
Mid-Atlantic Delaware Bay	4.2	11.2	5.2	30.0	36.0	5.3	17.0	2.5	5.6	14.2	34.5	-	-	-	-	-	-	-	165.8
Mid-Atlantic Chesapeake Bay	0.3	3.6	7.9	16.9	50.9	41.0	109.1	57.4	159.5	133.6	375.4	215.5	-	-	-	-	-	-	1,171.0
Baltimore, MD	0.2	0.7	0.0	3.2	3.8	21.0	44.0	17.0	50.1	20.9	67.9	-	-	-	-	-	-	-	228.8
Hampton Roads, VA	0.1	2.9	7.9	13.7	47.1	20.0	65.1	40.4	109.3	112.6	307.5	215.5	-	-	-	-	-	-	942.1
Mid-Atlantic Morehead City and Beaufort, NC	0.0	-	-	-	0.0	-	-	-	1.1	-	-	-	-	-	-	-	-	-	1.1
Mid-Atlantic Wilmington, NC	0.0	-	0.1	-	0.9	1.1	-	3.7	9.9	7.8	-	19.8	-	-	-	-	-	-	43.3
Mid-Atlantic Georgetown, SC	0.0	-	-	-	-	-	-	-	-	1.4	-	0.1	-	-	-	-	-	-	1.5
Mid-Atlantic Charleston, SC	0.1	0.5	5.9	2.8	11.4	16.9	62.8	37.7	51.6	65.6	174.6	116.8	-	-	-	-	-	-	546.7
Mid-Atlantic Savannah, GA	1.2	1.0	0.6	11.0	14.7	22.0	30.7	15.5	72.9	98.4	96.3	132.4	-	-	-	-	-	-	496.9
Southeastern US	2.3	20.9	2.3	2.7	2.2	5.0	15.8	4.5	12.1	5.3	17.0	-	-	-	-	-	-	-	90.1
Brunswick, GA	0.1	-	-	0.5	0.5	-	-	2.5	3.9	-	0.1	-	-	-	-	-	-	-	7.6
Fernandina, FL	1.2	6.7	1.2	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	9.2
Jacksonville, FL	1.1	14.2	1.1	2.2	1.7	5.0	15.8	1.7	7.9	5.3	16.9	-	-	-	-	-	-	-	72.9
Port Canaveral, FL	-	-	-	-	-	-	-	0.2	0.3	-	-	-	-	-	-	-	-	-	0.5
Total	8.5	40.6	54.0	86.9	147.8	134.2	319.6	195.9	462.7	533.0	996.4	764.5	-	-	-	-	-	-	3,744.2

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-6. Containerships: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	0.1	0.3	0.3	0.9	0.2	1.8	0.6	0.8	4.1	3.2	7.7	-	-	-	-	-	-	20.1
Eastport, ME	-	0.0	-	-	-	-	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	0.3
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	0.0	0.3	0.3	0.8	0.2	1.5	0.3	0.5	3.6	2.7	6.2	-	-	-	-	-	-	16.4
Portsmouth, NH	-	0.0	-	0.0	0.1	-	0.3	0.3	0.2	0.5	0.5	1.5	-	-	-	-	-	-	3.4
Northeastern US - Off Race Point	-	2.0	-	0.1	0.5	0.4	0.2	0.5	12.2	5.5	14.3	-	-	-	-	-	-	-	35.5
Boston, MA	-	2.0	-	0.1	0.5	0.4	0.2	0.5	12.2	5.5	14.3	-	-	-	-	-	-	-	35.5
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	0.4	-	-	-	-	-	0.0	-	0.1	-	-	-	-	-	-	-	-	0.5
New Bedford, MA	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Providence, RI	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4
New London, CT	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.1
New Haven, CT	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0
Bridgeport, CT	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.0	2.6	34.5	20.8	24.4	15.2	110.6	81.3	122.4	124.1	328.5	374.2	-	-	-	-	-	-	1,238.5
Mid-Atlantic Delaware Bay	2.5	20.3	4.1	25.4	29.7	1.9	16.8	8.6	11.0	17.3	71.0	0.1	-	-	-	-	-	-	208.7
Mid-Atlantic Chesapeake Bay	0.5	6.9	9.9	17.6	33.8	23.8	128.0	70.4	161.6	100.7	341.5	266.0	-	-	-	-	-	-	1,160.7
Baltimore, MD	0.4	2.1	0.0	2.0	3.2	10.1	45.9	13.5	47.3	22.2	54.1	0.1	-	-	-	-	-	-	201.0
Hampton Roads, VA	0.1	4.8	9.9	15.5	30.6	13.7	82.2	56.9	114.3	78.5	287.4	265.9	-	-	-	-	-	-	959.8
Mid-Atlantic Morehead City and Beaufort, NC	0.1	0.0	-	-	0.6	0.6	-	-	2.1	-	-	-	-	-	-	-	-	-	3.4
Mid-Atlantic Wilmington, NC	0.1	0.2	0.3	0.4	0.4	1.1	0.6	1.6	7.8	8.3	8.2	4.2	-	-	-	-	-	-	33.3
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.1	0.7	6.3	3.4	5.3	7.0	60.4	58.3	58.9	40.5	181.7	107.4	-	8.9	-	-	-	-	538.8
Mid-Atlantic Savannah, GA	1.1	1.3	2.2	11.1	12.1	9.5	33.0	37.6	69.6	85.3	185.4	190.4	-	8.6	-	-	-	-	647.2
Southeastern US	1.8	20.4	2.0	3.3	0.5	3.0	14.2	2.8	24.7	7.5	16.8	0.1	-	-	-	-	-	-	96.9
Brunswick, GA	0.0	-	-	-	0.5	0.6	-	2.4	7.3	-	-	0.1	-	-	-	-	-	-	10.9
Fernandina, FL	0.2	8.8	1.6	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	11.6
Jacksonville, FL	1.6	11.6	0.4	3.3	0.1	2.4	14.1	0.3	15.9	7.5	16.8	-	-	-	-	-	-	-	73.9
Port Canaveral, FL	0.0	0.0	0.0	-	-	-	0.1	0.1	0.4	-	-	-	-	-	-	-	-	-	0.6
Total	6.2	55.0	59.6	82.3	108.2	62.6	365.5	261.6	471.0	393.4	1,150.5	950.1	-	17.5	-	-	-	-	3,983.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-7. Freight Barges: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.0	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-8. Freight Barges: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-9. General Cargo Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.1	-	-	-	-	-	-	-	-	1.0
Eastport, ME	-	0.0	-	0.0	-	-	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	0.3
Searsport, ME	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	0.0	0.1	0.1	-	0.0	0.1	0.0	0.1	0.1	-	-	-	-	-	-	-	-	-	0.6
Portsmouth, NH	-	0.0	-	0.0	0.0	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.1
Northeastern US - Off Race Point	0.0	0.6	0.2	-	0.3	-	-	1.4	-	-	-	-	-	-	-	-	-	-	2.5
Boston, MA	0.0	0.6	0.2	-	0.3	-	-	1.4	-	-	-	-	-	-	-	-	-	-	2.5
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	1.4	1.5	1.3	4.0	1.5	1.0	0.1	0.1	4.0	-	-	-	-	-	-	-	-	14.8
New Bedford, MA	0.0	0.3	0.9	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9
Providence, RI	0.0	0.2	0.6	-	0.6	-	-	0.0	-	-	-	-	-	-	-	-	-	-	1.4
New London, CT	0.0	-	-	0.8	-	-	0.9	0.0	-	0.1	-	-	-	-	-	-	-	-	1.9
New Haven, CT	0.0	0.5	0.0	0.4	1.7	1.5	0.0	0.0	0.1	3.9	-	-	-	-	-	-	-	-	8.3
Bridgeport, CT	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.0	1.7	1.4	0.7	1.8	3.5	5.3	9.7	7.4	6.0	-	-	-	-	-	-	-	-	37.5
Mid-Atlantic Delaware Bay	0.0	7.5	9.0	10.2	4.3	7.6	2.7	7.8	2.9	5.6	-	-	-	-	-	-	-	-	57.7
Mid-Atlantic Chesapeake Bay	0.1	5.2	5.8	7.8	14.6	12.9	8.1	6.8	21.8	16.1	-	-	-	-	-	-	-	-	99.2
Baltimore, MD	0.0	2.0	2.8	7.4	12.9	4.7	0.9	-	14.4	12.6	-	-	-	-	-	-	-	-	57.6
Hampton Roads, VA	0.0	3.2	3.1	0.5	1.8	8.2	7.2	6.8	7.4	3.4	-	-	-	-	-	-	-	-	41.6
Mid-Atlantic Morehead City and Beaufort, NC	0.0	0.2	0.2	0.3	0.0	0.5	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Mid-Atlantic Wilmington, NC	0.0	0.6	1.0	2.1	1.0	1.3	0.0	2.1	9.7	5.6	-	-	-	-	-	-	-	-	23.4
Mid-Atlantic Georgetown, SC	-	0.3	0.0	0.0	-	-	-	0.0	3.9	0.3	-	-	-	-	-	-	-	-	4.6
Mid-Atlantic Charleston, SC	0.0	0.7	0.8	1.9	1.3	1.6	1.7	10.2	18.9	1.8	-	-	-	-	-	-	-	-	38.8
Mid-Atlantic Savannah, GA	0.0	2.2	2.0	2.1	2.9	7.2	3.0	4.0	25.9	14.8	-	-	-	-	-	-	-	-	64.1
Southeastern US	0.2	5.1	2.8	2.6	0.8	1.0	0.6	12.4	27.7	14.7	-	-	-	-	-	-	-	-	68.0
Brunswick, GA	0.0	0.2	0.6	1.7	0.3	-	0.6	7.3	8.5	0.1	-	-	-	-	-	-	-	-	19.3
Fernandina, FL	0.0	1.1	0.7	0.0	-	-	-	2.6	3.5	2.7	-	-	-	-	-	-	-	-	10.7
Jacksonville, FL	0.1	3.7	1.3	0.8	0.4	1.0	0.0	2.4	15.2	12.0	-	-	-	-	-	-	-	-	36.9
Port Canaveral, FL	0.0	0.1	0.3	0.0	0.1	-	-	0.2	0.4	-	-	-	-	-	-	-	-	-	1.1
Total	0.4	25.5	24.9	29.1	31.0	37.1	22.6	54.7	118.4	68.9	-	-	-	-	-	-	-	-	412.6

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-10.2 General Cargo Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	0.1	0.3	0.2	0.2	0.3	0.1	0.4	1.0	1.1	-	-	-	-	-	-	-	-	3.8
Eastport, ME	-	0.0	0.1	0.1	-	-	-	-	0.3	0.3	-	-	-	-	-	-	-	-	0.7
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	0.0	0.1	0.3	0.1	0.2	0.2	0.1	0.3	0.7	0.9	-	-	-	-	-	-	-	-	2.8
Portsmouth, NH	0.0	0.0	-	0.0	-	0.1	-	0.1	0.1	-	-	-	-	-	-	-	-	-	0.3
Northeastern US - Off Race Point	0.0	0.1	0.3	-	-	0.1	-	-	0.3	-	-	-	-	-	-	-	-	-	0.8
Boston, MA	0.0	0.1	0.3	-	-	0.1	-	-	0.3	-	-	-	-	-	-	-	-	-	0.8
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	0.9	3.5	0.4	1.8	0.8	0.0	2.4	3.0	5.8	-	-	-	-	-	-	-	-	18.7
New Bedford, MA	0.0	0.5	0.6	-	0.6	0.0	-	-	-	-	-	-	-	-	-	-	-	-	1.7
Providence, RI	-	0.2	1.2	0.0	-	0.7	-	1.2	-	-	-	-	-	-	-	-	-	-	3.3
New London, CT	-	-	0.0	-	-	0.0	0.0	1.2	1.5	1.9	-	-	-	-	-	-	-	-	4.7
New Haven, CT	-	-	1.7	0.4	1.2	0.0	0.0	-	1.5	3.9	-	-	-	-	-	-	-	-	8.8
Bridgeport, CT	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.0	1.2	0.3	0.4	1.0	1.9	3.0	0.9	2.4	0.1	-	-	-	-	-	-	-	-	11.2
Mid-Atlantic Delaware Bay	0.0	5.9	7.3	8.6	1.1	3.5	6.2	2.3	1.5	3.5	-	-	-	-	-	-	-	-	39.9
Mid-Atlantic Chesapeake Bay	0.0	4.3	5.0	8.2	14.9	6.1	8.0	5.8	5.0	13.0	-	-	-	-	-	-	-	-	70.5
Baltimore, MD	0.0	2.2	2.0	6.3	14.3	1.4	0.9	3.4	2.0	12.8	-	-	-	-	-	-	-	-	45.4
Hampton Roads, VA	0.0	2.1	3.0	1.9	0.7	4.7	7.1	2.4	2.9	0.1	-	-	-	-	-	-	-	-	25.0
Mid-Atlantic Morehead City and Beaufort, NC	0.0	0.2	-	0.5	0.4	2.0	-	0.7	0.1	-	-	-	-	-	-	-	-	-	4.0
Mid-Atlantic Wilmington, NC	0.0	0.7	0.5	1.5	1.0	0.5	1.6	2.2	9.3	4.6	-	-	-	-	-	-	-	-	21.8
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Charleston, SC	0.0	0.6	0.3	0.9	0.8	1.9	2.6	2.7	11.8	6.1	-	-	-	-	-	-	-	-	27.6
Mid-Atlantic Savannah, GA	0.0	2.8	3.0	3.4	1.6	1.1	3.3	2.0	12.7	15.1	-	-	-	-	-	-	-	-	45.0
Southeastern US	0.1	4.4	3.2	1.3	2.1	0.2	2.1	7.3	20.2	11.3	-	-	-	-	-	-	-	-	52.0
Brunswick, GA	0.0	0.2	0.9	0.6	0.3	0.1	0.6	3.0	7.7	-	-	-	-	-	-	-	-	-	13.4
Fernandina, FL	0.0	0.6	1.2	0.6	-	-	-	1.7	3.4	4.2	-	-	-	-	-	-	-	-	11.7
Jacksonville, FL	0.1	3.5	0.9	0.0	1.7	0.0	1.4	2.5	8.6	6.8	-	-	-	-	-	-	-	-	25.6
Port Canaveral, FL	0.0	0.1	0.2	0.1	-	0.0	0.1	0.1	0.5	0.2	-	-	-	-	-	-	-	-	1.4
Total	0.3	21.2	23.6	25.4	24.8	18.3	26.8	26.8	67.2	60.7	-	-	-	-	-	-	-	-	295.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-11. Passenger Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	1.6	5.7	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.5
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	1.4	3.6	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4
Portland, ME	0.2	2.1	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	7.6	39.8	6.1	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	55.6
Boston, MA	7.6	39.8	6.1	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	55.6
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	0.0	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Block Island Sound	23.6	43.4	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71.8
New Bedford, MA	-	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.5
Providence, RI	22.1	23.1	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49.9
New London, CT	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
Mid-Atlantic Ports of New York/New Jersey	47.1	100.1	19.8	-	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	175.1
Mid-Atlantic Delaware Bay	4.5	2.8	-	-	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	16.9
Mid-Atlantic Chesapeake Bay	3.5	31.8	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	36.7
Baltimore, MD	1.7	25.6	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	28.0
Hampton Roads, VA	1.8	6.2	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	8.7
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	5.7	14.6	-	3.4	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	28.6
Mid-Atlantic Savannah, GA	0.9	-	-	-	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5
Southeastern US	0.8	21.2	26.5	14.6	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	63.8
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Jacksonville, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Port Canaveral, FL	0.6	21.2	26.5	14.6	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	63.7
Total	95.4	259.5	59.3	18.0	32.4	-	-	-	-	-	-	-	-	-	-	-	-	-	464.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-12. Passenger Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.9	8.7	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.6	7.2	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4
Portland, ME	0.4	1.6	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	5.3	17.3	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.5
Boston, MA	3.7	17.3	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.9
Salem, MA	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
Northeastern US - Cape Cod Bay	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Block Island Sound	9.5	51.4	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65.8
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	9.5	51.4	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65.8
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Ports of New York/New Jersey	29.3	102.6	85.5	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	225.3
Mid-Atlantic Delaware Bay	10.4	19.2	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38.3
Mid-Atlantic Chesapeake Bay	0.5	37.7	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48.0
Baltimore, MD	0.3	33.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.0
Hampton Roads, VA	0.2	4.0	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	2.3	26.9	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.7
Mid-Atlantic Savannah, GA	1.7	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9
Southeastern US	5.7	27.4	32.0	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72.5
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Jacksonville, FL	0.1	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2
Port Canaveral, FL	5.6	23.2	32.0	7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68.2
Total	65.8	291.5	147.6	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	520.3

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-13. Refrigerated Cargo Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	7.8	26.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.0
New Bedford, MA	-	7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7
Providence, RI	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Bridgeport, CT	-	0.1	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.1
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	0.7	9.0	-	-	0.1	-	-	-	-	0.3	-	-	-	-	-	-	-	10.1
Mid-Atlantic Delaware Bay	1.3	48.0	45.1	29.2	6.9	6.1	62.2	-	-	-	4.6	-	-	-	-	-	-	-	203.4
Mid-Atlantic Chesapeake Bay	-	3.2	3.6	-	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	11.0
Baltimore, MD	-	2.4	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9
Hampton Roads, VA	-	0.8	0.1	-	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	5.1
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.8	0.5	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
Mid-Atlantic Savannah, GA	-	-	-	-	-	3.7	-	-	-	-	2.4	-	-	-	-	-	-	-	6.1
Southeastern US	-	2.5	8.7	2.9	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	14.2
Brunswick, GA	-	-	0.8	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7
Fernandina, FL	-	-	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6
Jacksonville, FL	-	1.4	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
Port Canaveral, FL	-	1.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
Total	1.3	64.1	93.1	32.8	7.0	14.2	62.2	-	-	-	7.3	-	-	-	-	-	-	-	281.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-14. Refrigerated Cargo Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
Boston, MA	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	5.4	23.6	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29.3
New Bedford, MA	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
Providence, RI	-	1.7	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	0.2	23.6	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.1
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	3.1	-	-	3.8	-	-	-	-	4.2	-	-	-	-	-	-	-	11.0
Mid-Atlantic Delaware Bay	0.7	47.5	131.0	32.2	3.5	-	55.2	-	-	-	21.4	-	-	-	-	-	-	-	291.4
Mid-Atlantic Chesapeake Bay	-	0.1	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6
Baltimore, MD	-	0.1	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
Hampton Roads, VA	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1
Mid-Atlantic Morehead City and Beaufort, NC	0.1	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Wilmington, NC	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.9	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	12.5	-	-	-	-	-	-	-	12.5
Southeastern US	-	3.2	15.5	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	19.3
Brunswick, GA	-	0.5	3.8	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4
Fernandina, FL	-	0.1	10.6	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.0
Jacksonville, FL	-	1.3	0.9	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3
Port Canaveral, FL	-	1.3	0.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6
Total	0.8	59.0	178.2	32.8	3.8	3.8	55.2	-	-	-	38.1	-	-	-	-	-	-	-	371.5

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-15. Ro-Ro Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.1	0.2	1.0	0.5	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	0.1	0.2	1.0	0.5	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	2.2	-	5.0	6.5	2.4	-	-	-	-	0.3	-	-	-	-	-	-	-	-	16.4
Boston, MA	2.2	-	5.0	6.4	2.4	-	-	-	-	0.3	-	-	-	-	-	-	-	-	16.3
Salem, MA	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.2	0.0	1.9	5.3	1.8	-	-	-	-	1.8	-	-	-	-	-	-	-	-	11.1
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	0.0	1.9	3.9	1.8	-	-	-	-	1.8	-	-	-	-	-	-	-	-	9.3
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Bridgeport, CT	0.2	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	1.0	5.6	47.7	39.0	22.5	20.1	4.2	4.7	27.9	3.0	63.4	0.1	-	-	-	-	-	-	239.1
Mid-Atlantic Delaware Bay	1.2	0.8	13.1	25.6	8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	49.3
Mid-Atlantic Chesapeake Bay	0.3	0.5	53.6	50.6	38.0	19.3	13.2	16.1	34.0	3.6	95.1	-	0.1	-	-	-	-	-	324.4
Baltimore, MD	0.1	0.4	45.9	45.5	30.2	16.3	9.6	10.7	15.7	3.5	46.6	-	-	-	-	-	-	-	224.6
Hampton Roads, VA	0.2	0.1	7.7	5.0	7.8	2.9	3.6	5.3	18.3	0.1	48.4	-	0.1	-	-	-	-	-	99.7
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.1	0.2	0.7	0.4	-	-	-	-	6.9	-	-	-	-	-	-	-	-	-	8.3
Mid-Atlantic Georgetown, SC	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6
Mid-Atlantic Charleston, SC	-	0.2	12.3	8.3	1.7	15.6	-	0.6	-	0.8	7.1	-	-	-	-	-	-	-	46.6
Mid-Atlantic Savannah, GA	0.3	0.3	4.2	4.3	8.6	4.1	11.0	6.4	13.6	3.2	1.2	-	-	-	-	-	-	-	57.3
Southeastern US	0.3	0.3	49.9	40.8	17.5	22.1	0.2	1.3	0.1	0.1	1.5	-	-	-	-	-	-	-	134.1
Brunswick, GA	-	0.2	20.1	19.0	6.4	11.5	0.0	0.1	0.1	0.1	-	-	-	-	-	-	-	-	57.5
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.3	-	29.7	21.8	11.1	10.5	0.1	1.2	-	0.1	1.5	-	-	-	-	-	-	-	76.3
Port Canaveral, FL	-	0.1	0.1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Total	5.8	8.2	189.3	182.0	101.0	81.2	28.6	29.2	82.4	12.9	168.2	0.1	0.1	-	-	-	-	-	889.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-16. Ro-Ro Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.3	0.6	2.2	2.2	0.2	0.2	-	-	0.3	-	0.6	-	-	-	-	-	-	-	6.6
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	0.3	0.6	2.2	2.2	0.2	0.2	-	-	0.3	-	0.1	-	-	-	-	-	-	-	6.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	0.5
Northeastern US - Off Race Point	1.2	-	0.2	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
Boston, MA	1.2	-	0.2	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	0.0	11.5	7.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	19.4
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	0.0	11.5	7.0	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	19.4
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.8	5.7	36.8	54.6	18.6	17.5	2.9	4.7	34.5	1.7	71.2	-	-	-	-	-	-	-	248.9
Mid-Atlantic Delaware Bay	0.8	0.4	13.3	26.3	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	45.9
Mid-Atlantic Chesapeake Bay	0.6	0.4	64.1	68.9	29.7	23.9	4.6	12.2	44.1	2.1	74.6	-	0.1	-	-	-	-	-	325.3
Baltimore, MD	0.4	-	61.6	61.8	22.6	20.0	3.4	8.1	30.2	2.0	40.0	-	-	-	-	-	-	-	250.2
Hampton Roads, VA	0.1	0.4	2.5	7.2	7.0	3.9	1.2	4.1	13.9	0.1	34.6	-	0.1	-	-	-	-	-	75.1
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	0.0	-	-	0.4	0.0	-	-	-	5.0	-	1.2	-	-	-	-	-	-	-	6.6
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.0	0.4	7.7	15.1	4.1	7.8	-	1.8	5.1	-	4.2	-	-	-	-	-	-	-	46.2
Mid-Atlantic Savannah, GA	0.5	0.5	3.7	5.5	7.2	3.6	1.9	7.2	13.9	0.3	0.1	-	-	-	-	-	-	-	44.6
Southeastern US	0.6	0.1	52.8	49.6	18.9	12.6	0.1	0.0	4.2	0.1	0.1	-	-	-	-	-	-	-	139.1
Brunswick, GA	-	-	21.5	18.0	5.4	9.6	0.0	-	3.1	-	-	-	-	-	-	-	-	-	57.6
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	0.1
Jacksonville, FL	0.5	0.0	30.7	31.6	13.5	2.9	0.1	0.0	1.1	0.1	-	-	-	-	-	-	-	-	80.7
Port Canaveral, FL	0.0	0.0	0.6	0.0	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	0.8
Total	4.7	8.0	192.4	230.3	84.7	65.6	9.5	26.0	107.1	4.2	151.9	-	0.1	-	-	-	-	-	884.0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-17. Tank Barges: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
Bridgeport, CT	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	0.3
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	1.4	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	0.7

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-18. Tank Barges: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2
Baltimore, MD	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
Hampton Roads, VA	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	0.0	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-19. Tankers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	0.2	0.7	0.1	0.0	0.2	1.0	1.1	0.4	0.5	0.2	0.0	-	-	2.5	2.4	0.2	0.0	9.6
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	0.1	0.3	-	-	0.1	0.4	0.2	0.1	0.0	0.1	-	-	-	-	-	-	-	1.2
Portland, ME	-	0.0	0.3	0.0	0.0	0.1	0.5	0.3	0.2	0.3	0.1	0.0	-	-	2.5	2.4	0.2	0.0	7.0
Portsmouth, NH	-	0.1	0.1	0.1	0.0	0.0	0.1	0.6	0.1	0.2	0.0	-	-	-	-	-	-	-	1.4
Northeastern US - Off Race Point	-	0.1	0.9	0.4	-	2.0	4.1	11.8	6.9	4.1	2.9	4.1	0.1	-	-	-	-	0.5	37.9
Boston, MA	-	0.1	0.9	0.4	-	2.0	4.1	11.8	6.9	4.1	2.9	4.1	0.1	-	-	-	-	0.5	37.9
Salem, MA	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.1
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	0.0	-	-	0.0	0.6	-	-	-	-	-	-	0.6
Mid-Atlantic Block Island Sound	-	0.2	1.3	0.0	0.3	2.3	1.7	5.1	2.0	6.5	1.2	3.4	0.0	0.0	2.5	-	3.6	0.7	31.1
New Bedford, MA	-	-	0.3	0.0	0.3	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-	0.6
Providence, RI	-	0.2	1.1	0.0	-	1.3	1.0	1.4	0.4	0.8	0.4	0.4	-	-	-	-	-	-	7.1
New London, CT	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0
New Haven, CT	-	0.0	-	0.0	-	1.0	0.7	3.3	1.6	4.9	0.0	-	-	-	-	-	-	-	11.5
Bridgeport, CT	-	-	-	-	-	-	-	0.4	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.4
Long Island, NY	-	-	-	-	-	0.0	-	0.0	-	0.7	0.8	3.0	0.0	0.0	2.5	-	3.6	0.7	11.5
Mid-Atlantic Ports of New York/New Jersey	0.4	1.0	7.7	2.6	3.2	8.3	6.0	17.8	17.4	21.2	6.6	17.5	7.0	4.1	25.8	3.9	5.3	0.7	156.6
Mid-Atlantic Delaware Bay	0.2	1.4	6.2	6.4	3.1	3.3	3.1	4.6	4.7	5.6	1.5	11.4	1.7	7.8	34.2	17.2	40.7	33.2	186.3
Mid-Atlantic Chesapeake Bay	0.0	2.6	2.8	3.5	1.7	3.1	1.7	2.0	1.8	5.0	0.8	7.7	5.7	2.1	3.6	3.9	0.5	0.7	49.2
Baltimore, MD	-	1.7	1.5	0.6	1.1	1.6	1.6	0.7	1.0	4.3	0.4	3.0	1.2	-	0.5	-	-	-	19.2
Hampton Roads, VA	0.0	0.9	1.3	3.0	0.6	1.5	0.1	1.3	0.7	0.8	0.4	4.7	4.5	2.1	3.2	3.9	0.5	0.7	30.0
Mid-Atlantic Morehead City and Beaufort, NC	-	-	0.2	0.0	0.0	0.5	0.0	-	-	-	-	-	-	-	-	-	-	-	0.7
Mid-Atlantic Wilmington, NC	0.0	0.7	2.4	2.0	0.6	2.2	1.7	0.9	0.7	3.7	1.1	1.2	-	-	-	-	-	-	17.2
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.0	0.6	0.5	0.3	0.0	0.3	1.0	2.3	5.8	1.3	1.1	-	-	-	-	-	-	13.3
Mid-Atlantic Savannah, GA	0.1	0.3	2.4	3.1	1.3	2.4	1.4	3.4	2.7	1.6	2.0	4.0	0.9	-	-	-	-	-	25.5
Southeastern US	0.1	0.1	0.9	0.7	0.3	0.9	0.7	2.9	2.6	7.1	1.4	0.9	0.0	0.0	0.0	-	-	-	18.8
Brunswick, GA	-	0.1	-	-	0.0	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.3
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.1	0.0	0.9	0.7	0.3	0.9	0.5	2.8	2.5	7.0	1.4	0.8	0.0	-	0.0	-	-	-	18.0
Port Canaveral, FL	-	-	-	0.0	-	0.0	-	0.1	0.0	0.1	-	0.1	0.0	0.0	0.0	-	-	-	0.5
Total	0.8	6.6	26.2	19.4	10.9	25.2	21.8	50.7	41.4	61.2	19.0	52.1	15.5	14.0	68.6	27.4	50.4	35.9	546.8

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-20. Tankers: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.0	0.2	1.0	0.1	0.1	0.3	0.9	1.1	1.0	0.9	0.4	0.1	0.0	-	1.5	3.0	0.4	0.5	11.5
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	0.0	0.4	-	-	0.1	0.3	0.2	0.1	0.0	0.1	0.0	-	-	-	0.0	-	-	1.2
Portland, ME	0.0	0.0	0.5	0.1	0.0	0.1	0.6	0.4	0.6	0.5	0.1	0.0	0.0	-	1.5	2.9	0.4	0.5	8.3
Portsmouth, NH	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.5	0.3	0.4	0.2	0.0	-	-	-	-	-	-	1.9
Northeastern US - Off Race Point	-	-	1.0	0.1	0.1	1.4	0.7	9.7	6.2	2.2	0.1	2.1	0.2	-	-	-	-	5.2	28.8
Boston, MA	-	-	1.0	0.1	0.1	1.4	0.7	9.7	6.2	2.2	0.1	2.0	0.2	-	-	-	-	5.2	28.8
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	0.1
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	0.0	0.6	2.4	0.6	-	-	-	-	-	3.6
Mid-Atlantic Block Island Sound	-	0.3	1.1	0.0	0.0	2.2	0.4	10.5	11.0	6.6	1.6	6.7	1.7	0.0	4.9	1.6	5.9	2.0	56.4
New Bedford, MA	-	0.0	0.8	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8
Providence, RI	-	0.2	0.0	0.0	0.0	0.6	0.0	3.5	3.4	1.9	0.4	1.2	0.4	-	0.0	-	-	-	11.8
New London, CT	-	0.0	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	0.4
New Haven, CT	-	-	0.3	-	-	1.6	0.3	6.7	7.6	3.1	0.4	0.0	-	-	0.5	-	-	-	20.5
Bridgeport, CT	-	-	-	-	-	-	-	0.4	0.0	0.4	0.0	0.4	-	-	0.0	-	0.6	0.0	1.8
Long Island, NY	-	-	0.0	-	-	-	-	-	0.0	0.7	0.8	5.0	1.3	0.0	4.4	1.6	5.3	2.0	21.2
Mid-Atlantic Ports of New York/New Jersey	0.0	2.3	4.6	2.9	3.2	7.7	5.3	22.1	21.2	34.2	7.0	28.4	11.5	2.7	25.8	8.7	5.3	2.2	195.2
Mid-Atlantic Delaware Bay	-	0.7	2.3	3.8	3.1	2.3	4.4	8.4	3.4	8.1	1.4	9.6	0.8	4.3	34.5	22.9	39.5	39.3	189.1
Mid-Atlantic Chesapeake Bay	0.0	2.2	2.8	2.4	1.4	2.9	1.6	1.6	2.8	12.9	0.8	11.4	9.4	0.9	3.6	0.6	1.8	8.6	67.6
Baltimore, MD	0.0	0.9	1.5	1.1	0.6	0.9	0.9	0.6	1.4	7.4	0.8	4.5	4.9	-	1.3	0.5	-	4.3	31.7
Hampton Roads, VA	0.0	1.3	1.2	1.3	0.9	2.0	0.7	1.0	1.3	5.5	0.1	6.9	4.4	0.9	2.3	0.1	1.8	4.3	35.9
Mid-Atlantic Morehead City and Beaufort, NC	-	-	0.0	0.4	0.0	1.9	0.4	0.2	-	0.0	-	0.3	-	-	-	-	-	-	3.2
Mid-Atlantic Wilmington, NC	-	-	2.6	1.0	0.7	1.3	1.4	2.3	1.4	4.4	0.7	1.6	-	0.0	-	-	-	-	17.3
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	0.1	0.7	0.0	-	0.7	0.2	0.8	2.4	7.2	0.6	3.0	-	0.2	-	-	-	-	15.9
Mid-Atlantic Savannah, GA	-	0.5	1.5	2.9	1.2	1.3	1.0	4.9	2.9	2.3	0.9	5.3	0.6	-	0.0	-	-	-	25.3
Southeastern US	0.8	0.0	0.1	0.4	0.3	0.9	0.6	4.7	4.9	5.5	0.4	2.0	0.0	0.0	-	0.4	-	-	21.0
Brunswick, GA	-	-	-	-	-	0.2	0.6	-	-	-	-	0.0	-	-	-	-	-	-	0.8
Fernandina, FL	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Jacksonville, FL	0.8	0.0	0.0	0.4	0.3	0.7	-	4.6	4.9	5.4	0.4	1.9	0.0	0.0	-	0.3	-	-	19.9
Port Canaveral, FL	-	-	0.0	-	-	-	-	0.0	0.0	0.1	0.1	0.1	-	0.0	-	0.0	-	-	0.3
Total	0.9	6.2	17.8	13.9	10.1	22.9	16.8	66.2	57.2	84.3	14.5	72.7	25.0	8.2	70.3	37.2	52.9	57.8	634.9

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-213. Towing Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
																			0
Total	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-22. Towing Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portland, ME	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Baltimore, MD	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Hampton Roads, VA	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
																			0
Total	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-23. Other Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2002 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																	Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150		150+
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.

Table H-24. Other Vessels: Estimated Economic Impact of ANPR on Foreign Flag Vessels 150 GRT and Above by Port Region, Port Area and Vessel DWT, 2003 (US\$ 000s)

ANPR Port Region and Port Area	DWT (000s)																		Total
	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-60	60-70	70-80	80-90	90-100	100-120	120-150	150+	
Northeastern US - Gulf of Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Searsport, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portland, ME	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portsmouth, NH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Off Race Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salem, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern US - Cape Cod Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Block Island Sound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Bedford, MA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Providence, RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New London, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Haven, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridgeport, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Island, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Ports of New York/New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Delaware Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Chesapeake Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hampton Roads, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Morehead City and Beaufort, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Wilmington, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Georgetown, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Charleston, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mid-Atlantic Savannah, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern US	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brunswick, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fernandina, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Canaveral, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Source: Prepared by Nathan Associates Inc. based on analysis of U.S. Coast Guard data on vessel calls at U.S. ports as described in text.